WATER SUPPLY OUTLOOK FOR MONTANA

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE,
and
MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State, and private organizations listed on the inside back cover of this report.

MAY 15, JUNE 1, 1967
and
SPECIAL MEASUREMENTS

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Westem United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data or reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Listed below are water supply outlook reports based on Federal-State-Private Cooperative snow surveys. Those published by the Soil Conservation Service may be obtained from Soil Conservation Service, Room 507, Federal Building, 701 N. W. Glisan, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

D. A. WILLIAMS, Administrator

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 507, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	P. O. Box 38, Boise, Idaho 83701
Montana	P. O. Box 855, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4001 Federal Building, Salt Lake City, Utah 84111
Washington	840 Bon Marche Bldg., Spokane, Washington 99206
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388 , Sacramento , California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

USDA-SCS-PORTLAND, OREG. 1966

WATER SUPPLY OUTLOOK

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

For

MONTANA

Report Prepared

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Montana Agricultural
Experiment Station
Bozeman, Montana

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MONTANA
WATER SUPPLY OUTLOOK
June 1, 1967

The snow pack continued to increase through mid-May and resulted in additional May 15 snow surveys being made.

Snow melt conditions the last half of May have been almost ideal for dissipating the large snow pack, particularly the lingering low elevation snow. However, soils are quite wet and would be capable of producing a large runoff if heavy rainfall occurs. The high elevation snow pack is presently above average but should present no problem so far as high water, as it is confined to relatively small areas.

Upon completion of the melt season, curves for all Montana snow pillows in operation during this season will be printed and distributed to those on our regular State bulletin mailing list.

MONTANA
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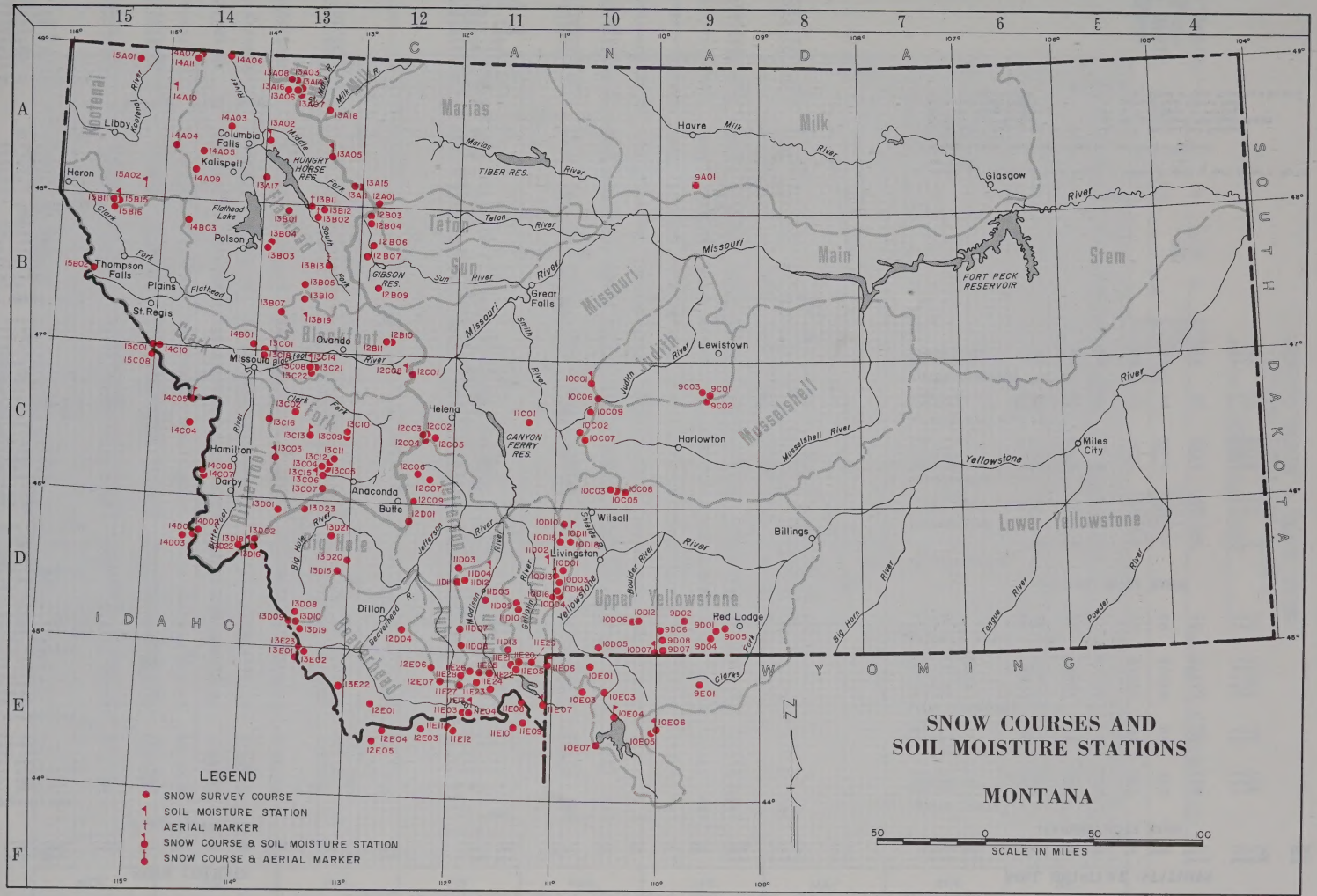

SNOW COURSES AND
SOIL MOISTURE STATIONS
MONTANA
LEGEND
SNOW SURVEY COURSE
SOIL MOISTURE STATION
AERIAL MARKER
SNOW COURSE & SOIL MOISTURE STATION
SNOW COURSE & AERIAL MARKER
SCALE IN MILES
50 0 50 100
CANADA
IDAHO
WYOMING
SOUTH DAKOTA
Libby
Columbia Falls
Kalispell
Heron
Polson
Thompson Falls
Plains
St. Regis
Missoula
Ovando
Hamilton
Darby
Anaconda
Butte
Dillon
Helena
Great Falls
Havre
Glasgow
Lewistown
Harlowton
Wilsall
Livingston
Billings
Red Lodge
Miles City
FORT PECK RESERVOIR
TIBER RES.
CANYON FERRY RES.
GIBSON RES.
HUNGRY HORSE RES.
Flathead Lake
Kootenai River
Clark Fork
Flathead River
Bitterroot River
Big Hole River
Jefferson River
Madison River
Gallatin River
Beaverhead R.
Marias River
Teton River
Sun River
Missouri River
Smith River
Judith River
Musselshell River
Yellowstone River
Boulder River
Shields River
Big Horn River
Tongue River
Powder River
Clarks Fork
Lower Yellowstone
Upper Yellowstone
Main Stem

INDEX to MONTANA SNOW COURSES and SOIL MOISTURE STATIONS

SNOW COURSES

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
COLUMBIA RIVER BASIN								
KOOTENAI RIVER								
Baree Creek	15B11	5500	36	26N	31W	1956	3,4,5,5½	2
Baree Midway	15B16	4600	31	26N	30W	1965	3,4,5,5½	2
Baree Trail	15B15	3800	5	25N	30W	1965	3,4,5,5½	2
Brush Creek	1A04	5000	12	30N	26W	1937	3,4,5	1,2
Graves Creek	1A11	4300	1	36N	25W	1965	3,4,5,5½,6	1,2
Red Mountain	15A01	6000	4	36N	25W	1937	3,4,5,5½,6	1,2
Weasel Divide	1A07	5450	20	37N	24W	1937	3,4,5,5½,6	1,2
FLATHEAD RIVER								
Bascoo Peak	14B03	5150	11	24N	25W	1961	3,4,5	1,5
Beaver Lake	13A11	5900	31	28N	11W	1964	3,4,5	2
Big Creek	13B03	6750	7	22N	18W	1941	3,4,5, 6	1,5
Camp Misery	13A17	6400	30	28N	18W	1962	3,4,5,	1,2
Desert Mountain	13A02	5600	24	31N	19W	1937	1,2,3,4,5, 6	1,2
Fatty Creek	13B04	5500	8	22N	18W	1962	3,4,5, 6	1,5
Griffin Creek Divide	1A09	5150	11	28N	25W	1960	3,4,5	1,5
Gunsight Lake	13B12	6300	35	26N	17W	1964	3,4,5	1
Hell Roaring Divide	1A03	5770	35	32N	22W	1942	1,2,3,4,5,5½,6	2
Holbrook	13B13	4530	18	21N	13W	1951	1,2,3,4,5	1,2
Kishenehn	1A06	3890	14	37N	22W	1954	3,4,5	6
Logan Creek	1A05	4300	34	30N	24W	1937	3,4,5	1,2
Marias Pass	13A05	5250	34	30N	14W	1934	1,2,3,4,5	3
Mineral Creek	13A16	4000	29	35N	17W	1957	3,4,5	6
North Fork Jocko	13B07	6330	3	17N	17W	1941	3,4,5,5½,6	1,5
Spotted Bear Mountain	13B02	7000	23	25N	15W	1948	1,2,3,4,5	1
Trinkus Lake	13B01	6100	9	25N	17W	1948	3,4,5	1
Twin Creeks	13B11	3980	24	26N	16W	1951	1,2,3,4,5	1
Upper Holland Lake	13B05	7000	28	20N	15W	1948	3,4,5	1
CLARK FORK RIVER								
Black Pine	13C13	7100	26	8N	15W	1959	Continuously	1
Copper Creek	12B10	5700	1	15N	9W	1962	3,4,5	1,2
Cotter Mine	12B11	6250	2	15N	9W	1962	3,4,5	1,2
Coyote Hill	13B10	4200	12	18N	16W	1947	1,2,3,4,5	1,2
El Dorado Mine	13C09	7800	23	8N	12W	1949	3,4	1
Fred Burr Pass	13C11	6000	12	6N	13W	1957	3,4,5	1
Gold Creek Lake	13C10	7200	14	8N	12W	1949	3,4	1
Heart Lake Trail	14C10	4800	11	14N	27W	1965	3,4,5	1,2
Hoodoo Creek	15C08	6000	17	17N	27W	1967	Continuously	1,2
Hoodoo Creek	15C01	5900	16	14N	27W	1937	1,2,3,4,5	1,2
Intergaard	13C04	6450	6	5N	13W	1936	2,3,4,5	4
Lubrecht Forest No. 3	13C21	5450	19	13N	14W	1951	1,2,3,4,5	8
Lubrecht Forest No. 4	13C22	4650	23	13N	15W	1951	1,2,3,4,5	8
Lubrecht Forest No. 6	13C08	4040	11	13N	15W	1951	1,2,3,4,5	8
Red Lion	13C12	7100	22	6N	13W	1958	3,4,5	1
Skalkaho Summit	13C03	7260	30	6N	17W	1937	3,4,5,5½,6	1
Slide Rock Mountain	13C02	7100	35	10N	16W	1937	3,4,5	1
Southern Cross	13C05	6500	8	5N	13W	1936	2,3,4	4
Spring Gulch	13C18	6000	12	14N	19W	1961	1,2,3,4,5	8
Storm Lake	13C07	7780	19	4N	13W	1939	1,2,3,4,5	1
Stuart Mill	13C06	6500	19	5N	13W	1936	2,3,4	4
Stuart Mountain	13C01	7400	6	14N	18W	1936	1,2,3,4,5,5½,6	8
TV Mountain	14B01	6800	33	15N	19W	1956	1,2,3,4,5,5½,6	8
BITTERROOT RIVER								
Ambrose	13C16	6480	28	9N	18W	1960	3,4,5	1
East Fork R.S.	13D01	5400	16	2N	17W	1937	3,4	1,
Gibbons Pass	13D02	7100	4	2S	19W	1934	1,2,3,4,5,5½,6	1,3
Lost Horse	14C07	5940	5	4N	23W	1960	3,4,5,5½,6	1
Nez Perce Camp	14D02	5680	19	1S	23W	1937	3,4,5	1
Nez Perce Pass	14D01	6570	25	1S	24W	1937	3,4,5	1
Saddle Mountain	13D22	7940	5	2S	19W	1964	3,4,5,5½,6	1
Twin Lakes	14C08	6510	32	5N	23W	1960	3,4,5,5½,6	1
ST. MARY RIVER BASIN								
Hudson Bay Divide	13A18	5800	24	34N	14W	1963	3,4,5	3
Iceberg Lake No. 3	13A03	5600	1	35N	17W	1922	5	3,9
Josephine Lower No. 9	13A14	4900	22	35N	16W	1955	5	3,9
Mount Allen No. 7	13A07	5700	27	35N	16W	1922	5	3,9
Piegan Pass No. 6	13A06	5500	27	35N	16W	1922	5	3,9
Ptarmigan No. 8	13A08	5800	36	36N	17W	1937	5	3,9
MISSOURI RIVER BASIN								
BEAVERHEAD RIVER								
Bloody Dick	13D10	7600	12	8S	16W	1948	3,4,5	1
Carter Creek	12D04	7400	22	8S	7W	1963	2,3,4	1
Dad Creek Lake	13E22	8400	24	12S	13W	1965	3,4,5	1
Elk Horn Springs	13D15	7800	21	4S	12W	1935	3,4,5	3
Gold Stone	13D09	8100	11	8S	16W	1948	3,4,5	1
Lakeview Canyon	11E04	6930	26	14S	2W	1948	3,4,5	10
Lakeview Ridge	11E03	7400	27	14S	2W	1948	3,4,5	10
Lemhi Pass	13E01	7480	9	10S	15W	1948	3,4	1
Lemhi Ridge	13E23	8100	4	10S	15W	1967	3,4	1
Trail Creek	13E02	7090	15	10S	15W	1948	3,4	1
White Pine Ridge	12E01	8850	18	14S	9W	1948	3,4,5	1
RUBY RIVER								
Clover Meadow	11D08	8600	28	9S	2W	1963	3,4,5	1
Divide	12E07	7900	14	12S	4W	1963	3,4,5	1
Notch	12E06	8500	18	11S	4W	1963	3,4,5	1
BIG HOLE RIVER								
Abundance Lake	13D20	8800	7	3S	11W	1963	3,4,5	1
Darkhorse Lake	13D19	8600	4	8S	16W	1963	3,4,5	1
Foolhen	13E21	8280	11	1S	13W	1963	3,4,5	1
Jahnke Creek	13D08	7340	25	7S	16W	1948	3,4,5	1
Palisade Creek	13D23	8450	3	2N	15W	1967	3,4,5	1
JEFFERSON RIVER								
Berry Meadow	12D07	7300	8	5N	5W	1962	3,4,5	1
Copper Mountain	12D09	7700	13	3N	7W	1966	2,3,4,5	4
Picnic Grounds	12D06	6500	21	5N	6W	1943	2,3,4	4
Pipestone Pass	12D01	7200	10	1N	7W	1938	1,2,3,4,5	1
MADISON RIVER								
Call Road	11D07	8050	21	8S	2W	1962	3,4,5	1
Four Mile	11D12	6900	5	4S	2W	1965	3,4,5	1
Freezeout Lake	11E25	7200	6	12S	1E	1965	3,4,5,5½,6	2
Freezeout Mountain	11E26	8250	26	11S	1W	1965	3,4,5,5½,6	2
Hebgen Dam	11E05	6650	22	11S	3E	1934	1,2,3,4,5	3
Jack Creek	11D05	7500	13	6S	1E	1961	3,4,5	1
Lake Creek	11E22	6100	27	11S	1E	1965	3,4,5,5½,6	2
Lion Mountain	11E28	8760	23	11S	2W	1967	Continuously	2
Lower Twin	11D11	7900	12	4S	3W	1965	3,4,5	1
Meridian Creek	11E23	7000	31	12S	1E	1965	3,4,5,5½,6	2
North Meadow	11D03	7500	24	3S	3W	1961	3,4,5	1
Potomagteon Park	11E21	7150	33	10S	3E	1965	3,4,5	2
Sentinal Creek	11E20	8300	17	10S	3E	1965	3,4,5	2
Teepee Creek	11E24	8000	15	12S	1W	1965	3,4,5,5½,6	2
Upper West Fork	11E27	8750	6	12S	2W	1966	3,4,5,5½,6	2
West Yellowstone	11E07	6700	34	13S	5E	1934	Continuously	1,3,6
GALLATIN RIVER								
Arch Falls	10D14	7350	3	5S	6E	1963	1,2,3,4,5,5½,6	1
Bear Basin	11D09	8150	9	6S	3E	1963	3,4,5	1
Bridger Bowl	10D15	7250	25	1N	6E	1965	Continuously	1
Carrot Basin	11B29	9000	18	10S	4E	1967	Continuously	2
Devils Slide	10D04	8100	14	5S	6E	1935	1,2,3,4,5,5½,6	1
Hood Meadow	10D03	6600	22	4S	6E	1935	1,2,3,4,5,5½,6	1
Lick Creek	10D13	6860	10	4S	6E	1964	Continuously	1
Little Park	11D10	7400	22	6S	3E	1963	3,4,5	1
Maynard Creek	12D18	6210	19	1N	7E	1967	Continuously	1
New World	10D01	6700	24	3S	6E	1939	2,3,4	1
Shower Falls	10D16	8100	14	5S	6E	1966	Continuously	1
Taylor Peaks	11D13	8500	26	9S	2E	1967	Continuously	1
Twenty-One Mile	11B06	7150	1	11S	5E	1934	1,2,3,4,5	3
MISSOURI RIVER MAIN STEM								
Boulder Mountain	11D01	7950	1	9N	3E	1963	3,4,5	1
Chessman Reservoir	12D05	6200	2	8N	5W	1936	1,2,3,4,5	3
Deadman Creek	10D09	6450	23	12N	8E	1966	3,4,5,5½,6	1
Elk Peak	10D07	8000	10	8N	8E	1963	3,4,5	1
Grasshopper	10D02	7000	19	9N	8E	1938	3,4,5	1
Kings Hill	10D01	7500	34	13N	8E	1934	3,4,5,5½,6	1,3
Rocky Boy	9A01	5200	15	28N	16E	1941	3,4,	7
Stample Pass	12D01	6600	16	13N	7W	1934	3,4,5	3
Ten Mile Lower	12D02	6600	12	8N	6W	1935	1,2,3,4,5	3
Ten Mile Middle	12D03	6800	13	8N	6W	1934	1,2,3,4,5	3
Ten Mile Upper	12D04	8000	19	8N	5W	1935	1,2,3,4,5	3
SUN-TETON-MARIAS RIVERS								
Badger Pass	13A15	6900	4	27N	11W	1964	3,4,5	2
Cabin Creek	12B06	5200	33	23N	10W	1949	3,4,5	2
Five-Bull	12B09	5700	25	20N	10W	1948	3,4,5	1
Freight Creek	12A01	6000	13	26N	10W	1948	3,4,5	1
Goat Mountain	12B07	7000	20	22N	10W	1934	3,4,5	3
Wrong Creek	12B04	5700	32	25N	10W	1949	3,4,5	2
Wrong Ridge	12B03	6800	17	25N	10W	1949	3,4,5	2
JUDITH RIVER								
Avalanche	9C02	7100	24	12N	17E	1966	3,4,5	1
Crystal Lake	9C01	5150	19	12N	18E	1941	3,4,5	1
Rock Creek	9C03	5600	8	12N	18E	1966	3,4,5	1
Spur Park	10C06	8000	20	12N	9E	1963	Continuously	1
UPPER YELLOWSTONE RIVER								
Bald Ridge	10C05	7500	11	4N	10E	1961	3,4,5	1
Camp Senia	9D01	7890	2	8S	18E	1937	3,4,5,5½,6	1
Cooke Station	9D07	8150	19	9S	15E	1966	3,4,5	2
Crevice Mountain	10D05	8400	22	9S	9E	1935	3,4	2
Fisher Creek	9D06	9100	11	9S	14E	1966	Continuously	1,2
Grizzly Peak	9D05	8400	26	7S	13E	1967	1,2,3,4,5	1,2
Independence	10D06	8000	22	7S	12E	1940	3,4,5	1
Monument Peak	10D12	9000	22	7S	12E	1961	3,4,5	1
Northeast Entrance	10D07	7400	33	9S	14E	1937	Continuously	1,6
Porcupine R.S.	10C03	6500	10	4N	10E	1938	3,4,5	1
Sacajawea	10D10	6550	36	2N	6E	1960	3,4,5	1
South Fork Shields	10C08	8100	13	4N	10E	1965	3,4,5	1
Timberline Creek	9D04	8850	15	8S	18E	1961	3,4,5	1
West Rosebud	9B02	7500	9	7S	16E	1960	3,4	4
White Mill	9D08	8700	18	9S	15E	1967	3,4,5	2

SOIL MOISTURE STATIONS

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
COLUMBIA RIVER BASIN								
KOOTENAI RIVER								
Baree Trail	15B15M	3800	5	25N	30W	1964	Monthly	2
Murphy Lake R.S.	14A10M	3000	5	34N	25W	1964	Monthly	2
Raven R.S.	15A02M	3050	2	26N	29W	1964	Monthly	2
FLATHEAD RIVER								
Desert Mountain	13A02M	5600	24	31N	19W	1956	Monthly	1
Marias Pass	13A05M	5250	34	30N	14W	1950	Monthly	1
CLARK FORK RIVER								
Black Pine	13C13M	7100	26	8N	15W	1965	Monthly	1
Georgetown Lake	13C15M	6450	6	5N	13W	1962	Monthly	1
Lubrecht Forest	13C12M	4100	11	13N	15W	1961	Monthly	8
Seeley Lake	13B19M	4030	21	17N	15W	1963	Monthly	2
Skalkaho Summit	13C03M	7260	30	6N	17W	1964	Monthly	1
BITTERROOT RIVER								
Gibbons Pass	13D18M	7100	4	2S	19W	1962	Monthly	1
Lolo Pass	14C05M	5250	11	10N	24W	1963	Monthly	1
MISSOURI RIVER BASIN								
BEAVERHEAD RIVER								
Lakeview	11E13M	6700	23	14S	2W	1962	Monthly	10
MADISON RIVER								
Red Bluff	11D04M	4800	7	3S	1E	1961	Monthly	7
West Yellowstone	11B07M	6700	34	13S	5E	1966	Monthly	6
GALLATIN RIVER								
Bridger Bowl	10D15M	7250	25	1N	6E	1965	Monthly	1
College Site	11D02M	4856	18	2S	5E	1956	Monthly	1
Lick Creek	10D13M	6860	10	4S	6E	1965	Monthly	1
Twenty-One Mile	11E06M	7150	1	11S	5E	1963	Monthly	6
MISSOURI RIVER MAIN STEM								
Kings Hill	10C01M	7420	34	13N	8E	1963	Monthly	1
Stample Pass	12C08M	6350	16	13N	7W	1963	Monthly	1
YELLOWSTONE RIVER								
Battle Ridge	10D11M	6020	32	2N	7E	1960	Monthly	1
Northeast Entrance	10D07M	7350	33	9S	14E	1962	Monthly	6

LEGEND

1/ Numerals 1,2,3,4,5,5½,6 refer to January 1, February 1, March 1, April 1, May 1, May 15 and June 1.

2/ Numerals refer to Agency that secures the snow survey as follows:

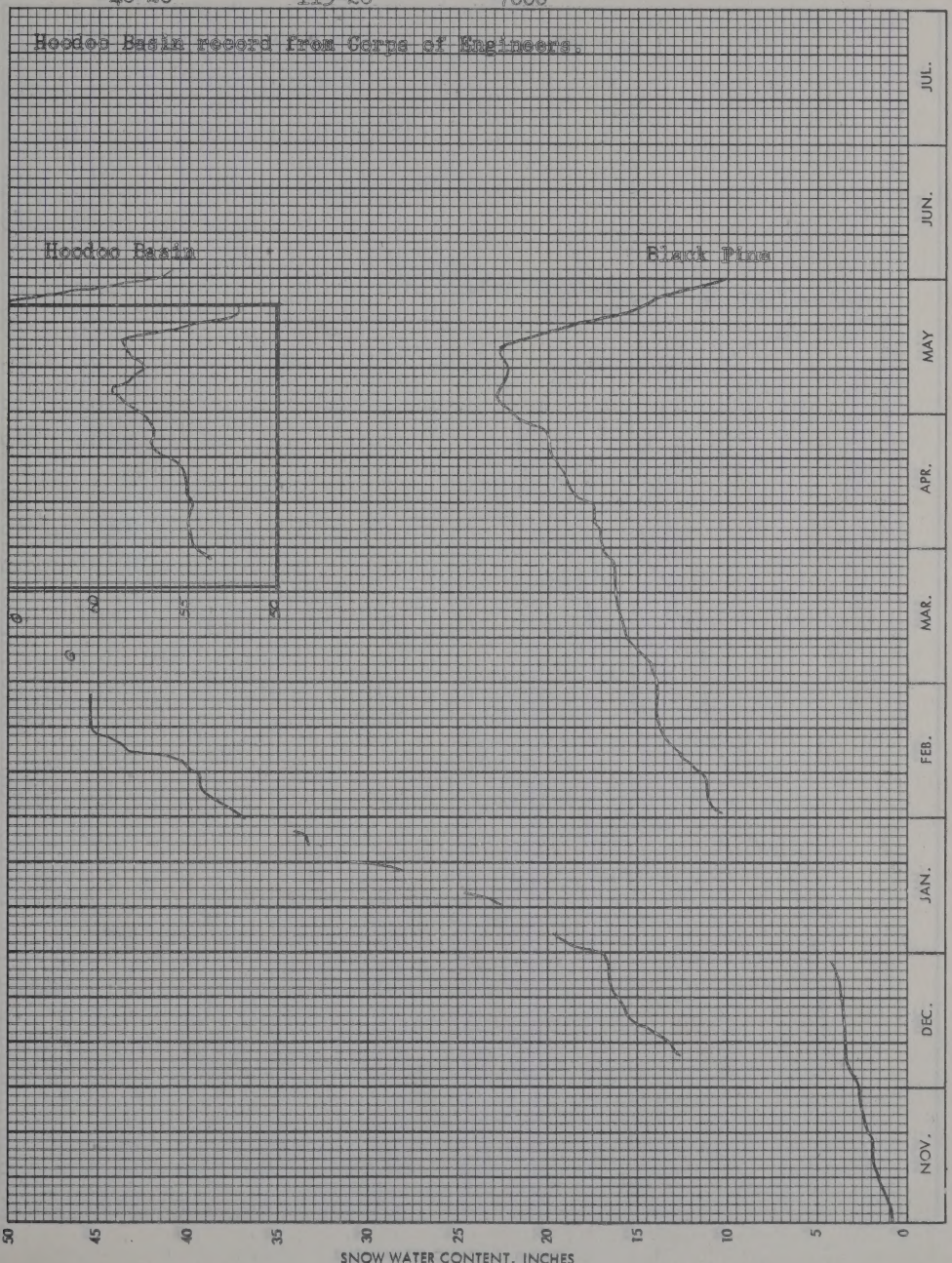
1. U. S. Soil Conservation Service
2. U. S. Forest Service
3. U. S. Geological Survey
4. Montana Power Company
5. U. S. Indian Service
6. U. S. National Park Service
7. MSU Agricultural Experiment Station
8. U. of M. School of Forestry
9. Dominion Water & Power Bureau
10. U. S. Bureau of Sport Fisheries & Wildlife

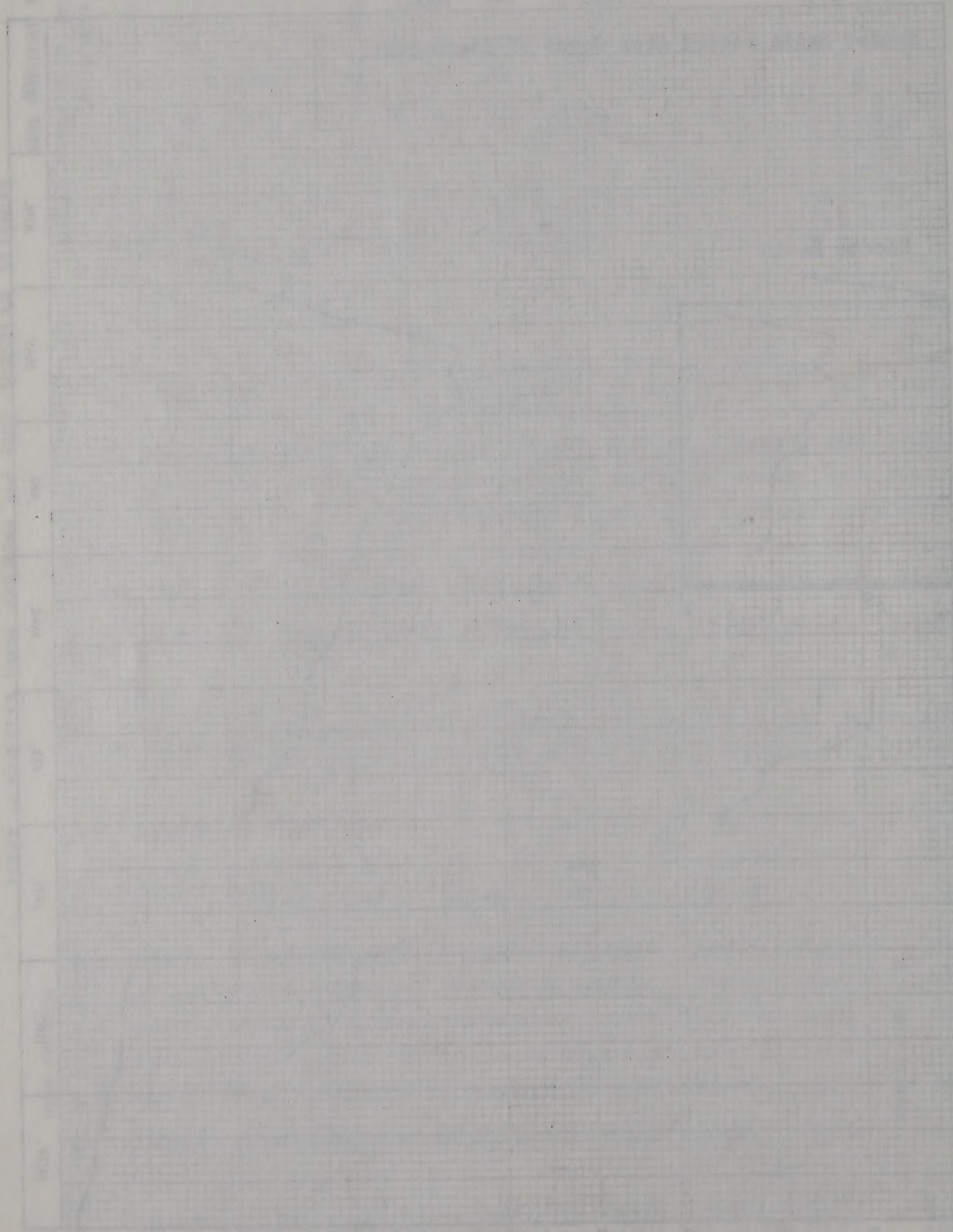
M - Soil Moisture

HOODOO BASIN & BLACK PINE
SNOW PILLOW DATA

AS OF JUNE 1, 1967

Hoodoo Basin - Sec. 17 T. 14N R. 27W No. 15C08 Drainage: Clark Fork
Black Pine - 26 8N 15W 13C13
Hoodoo Basin - Lat. 46-59 Long. 115-02 Elev. 6000
Black Pine - 46-26 113-26 7000

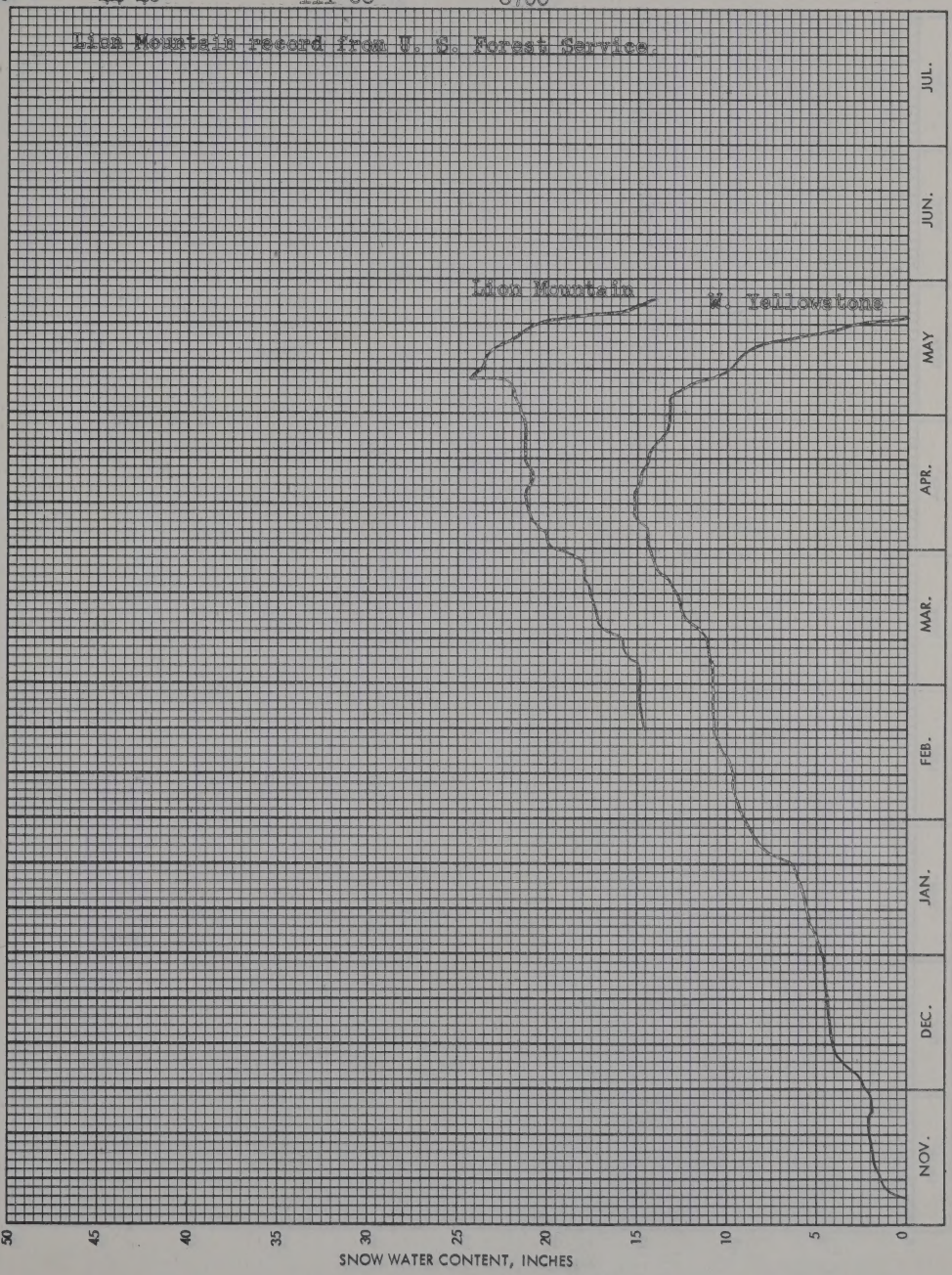


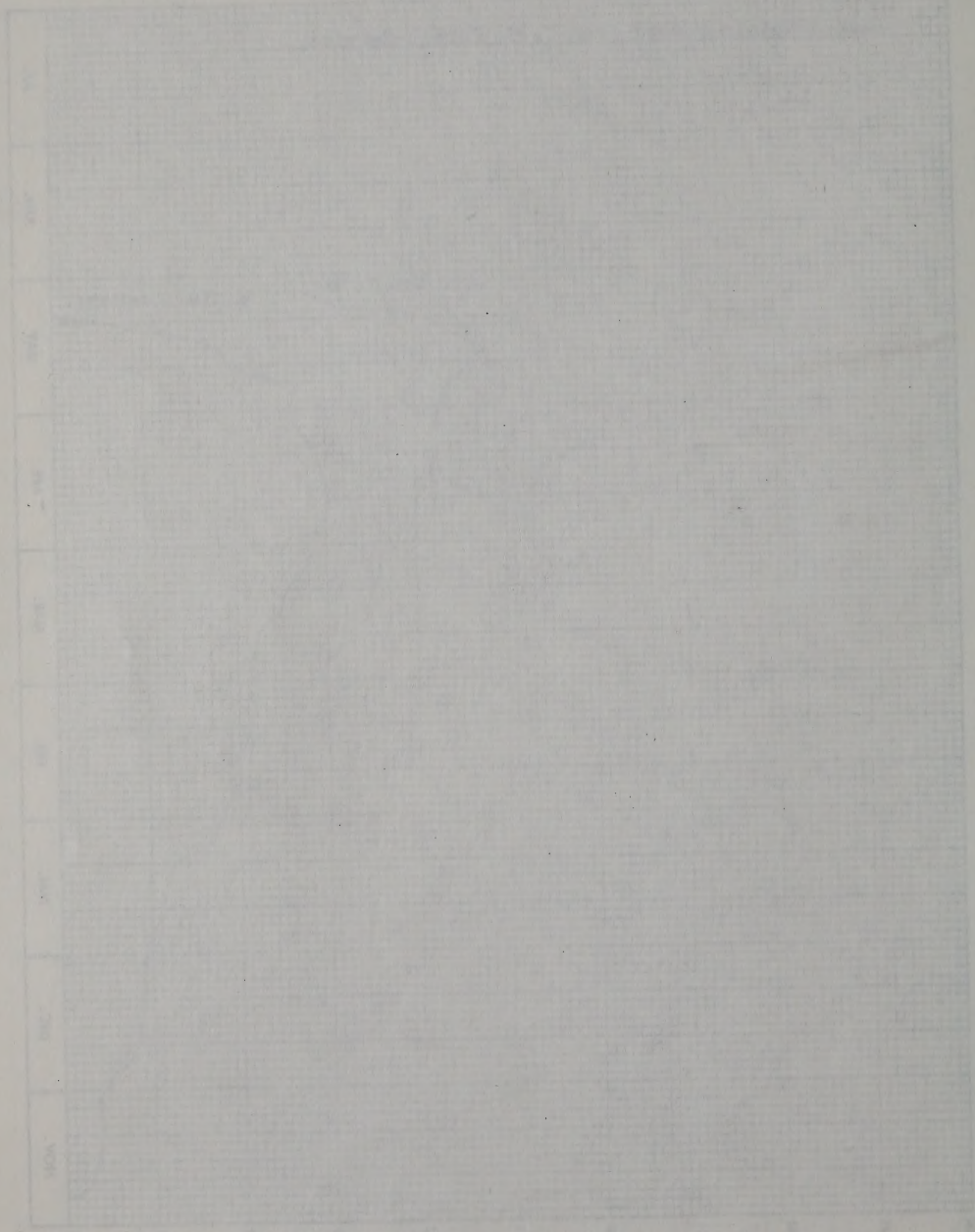


LION MOUNTAIN & W. YELLOWSTONE
SNOW PILLOW DATA

AS OF JUNE 1, 1967

.on Mountain – Sec. 23 T. 11S R. 2W No. 11E28 Drainage: Madison
Yellowstone – 34 13S 5E 11E07
.on Mountain – Lat. 44-52 Long. 111-48 Elev. 8760
Yellowstone – 44-40 111-06 6700



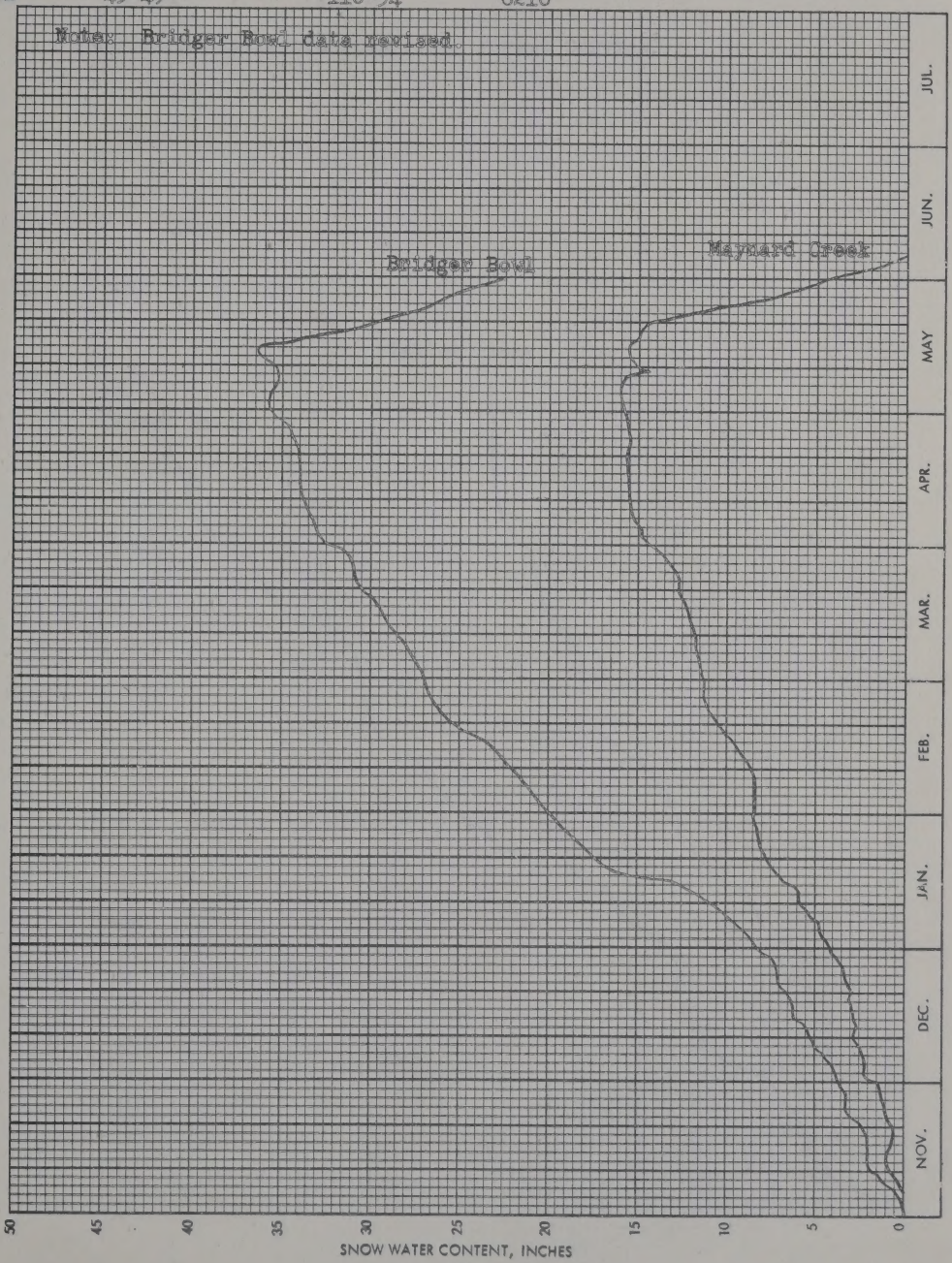


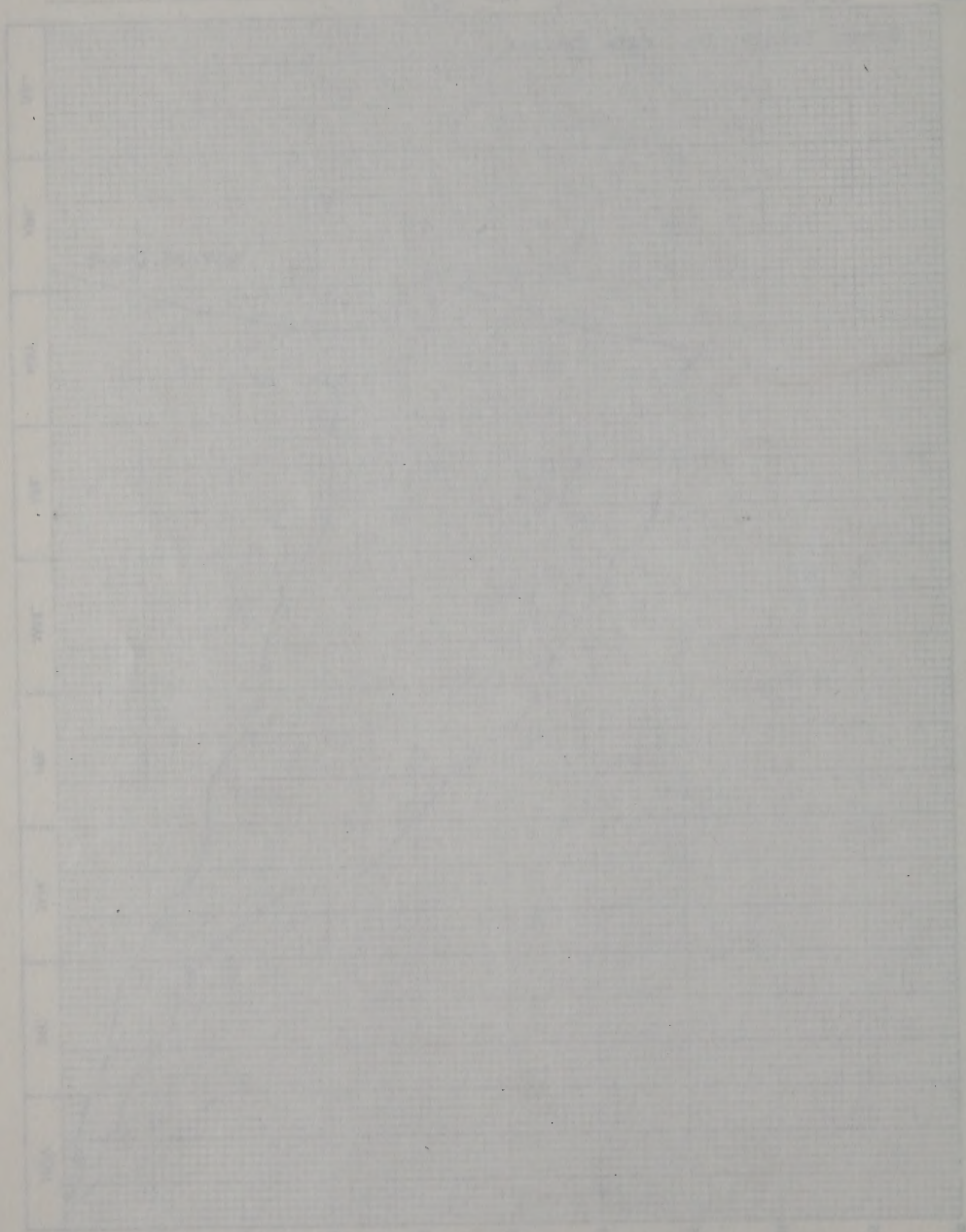
BRIDGER BOWL & MAYNARD CREEK
SNOW PILLOW DATA

AS OF JUNE 1, 1967

Bridger Bowl	–	Sec. 25	T. 1N	R. 6E	No. 10D15	Drainage: Gallatin		
Maynard Creek	–	19	1N	7E	10D18			
Bridger Bowl	–	Lat. 45-48	Long. 110-55	Elev. 7250				
Maynard Creek	–	45-49	110-54	6210				

Note: Bridger Bowl data revised.

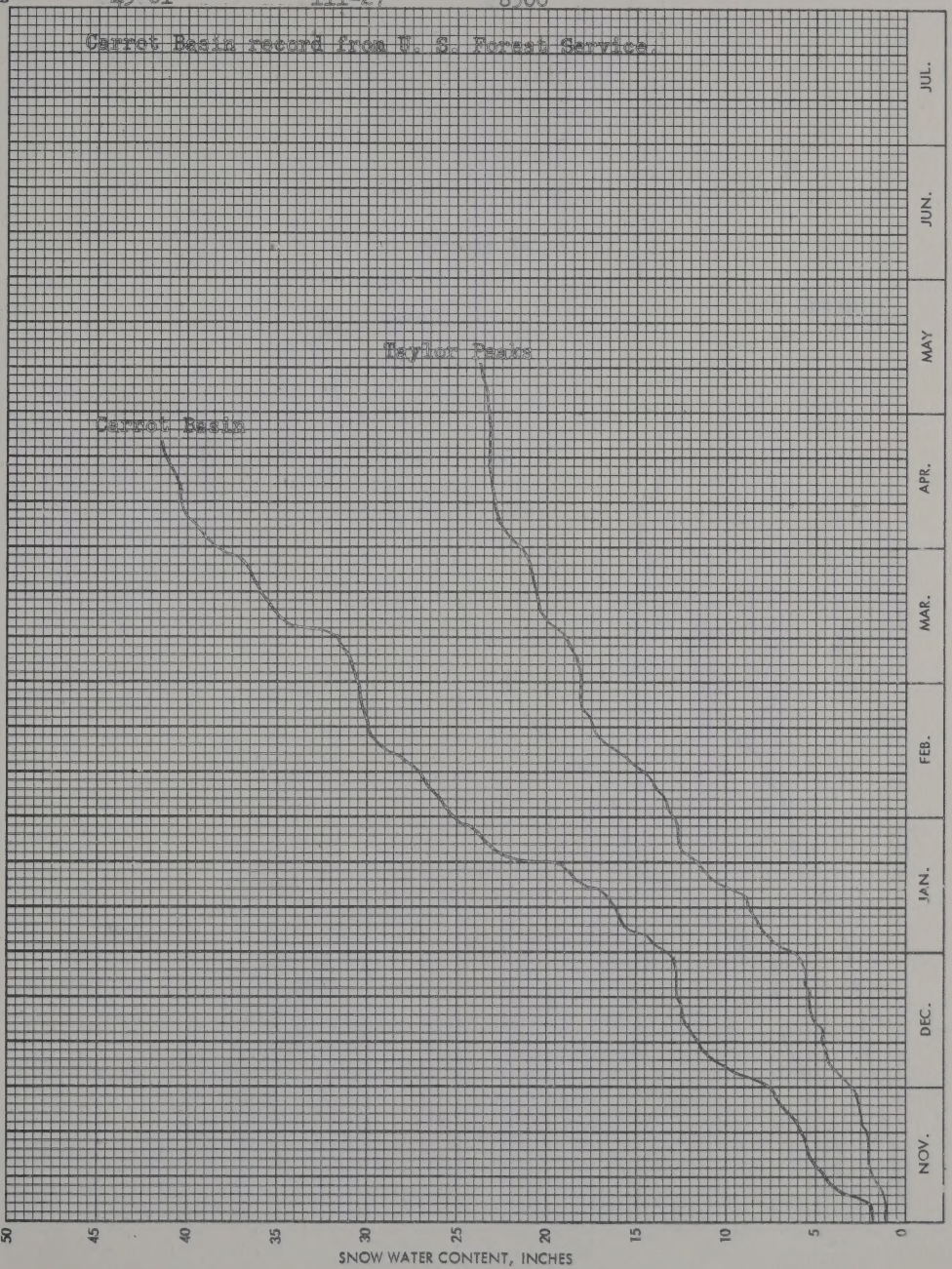


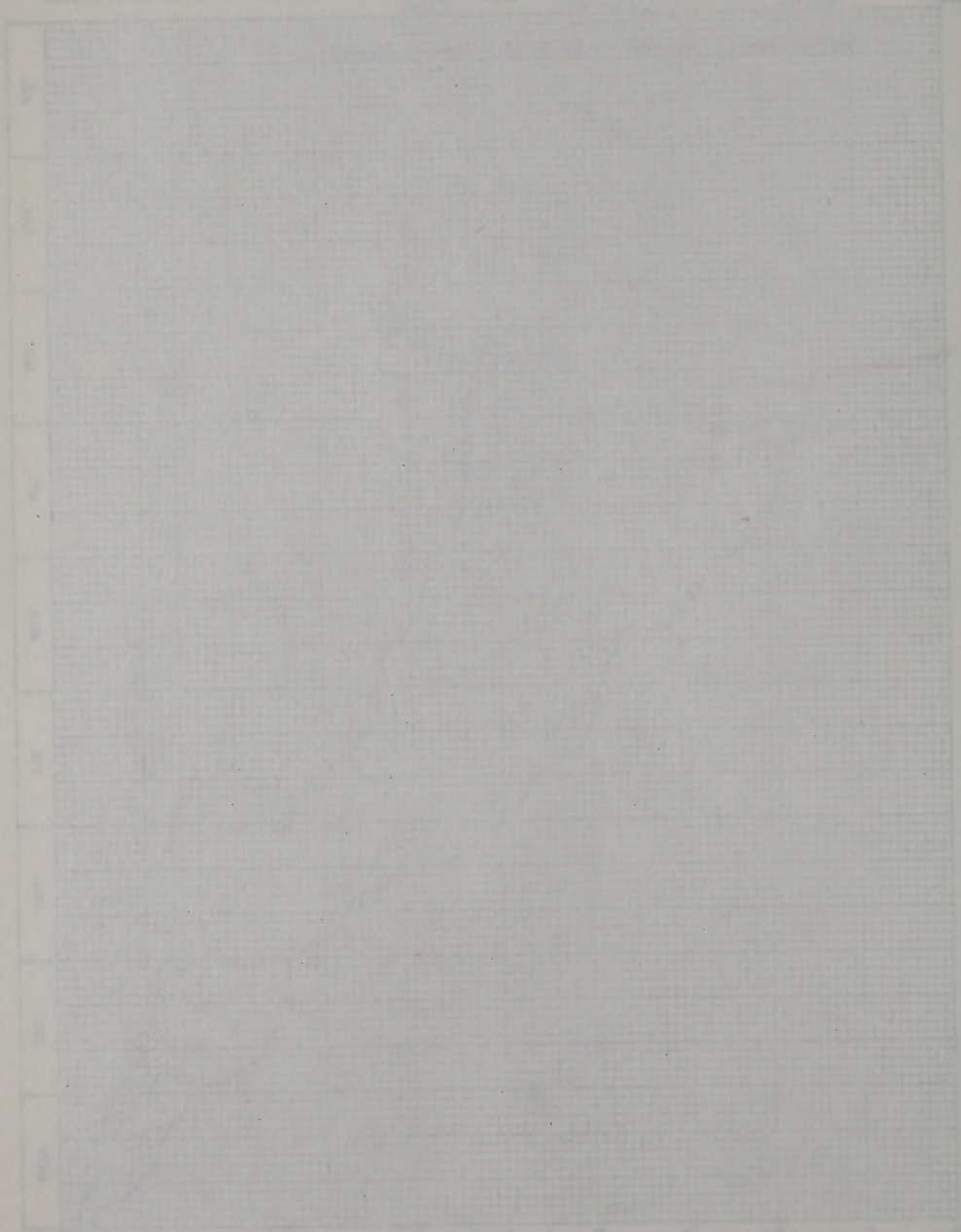


CARROT BASIN & TAYLOR PEAKS
SNOW PILLOW DATA

AS OF JUNE 1, 1967

Carrot Basin -	Sec. 18	T. 10S	R. 4E	No. 11E29	Drainage: Gallatin
Taylor Peaks -	26	9S	2E	11D13	
Carrot Basin -	Lat. 44-58		Long. 111-58	Elev. 9000	
Taylor Peaks -	45-01		111-27	8500	

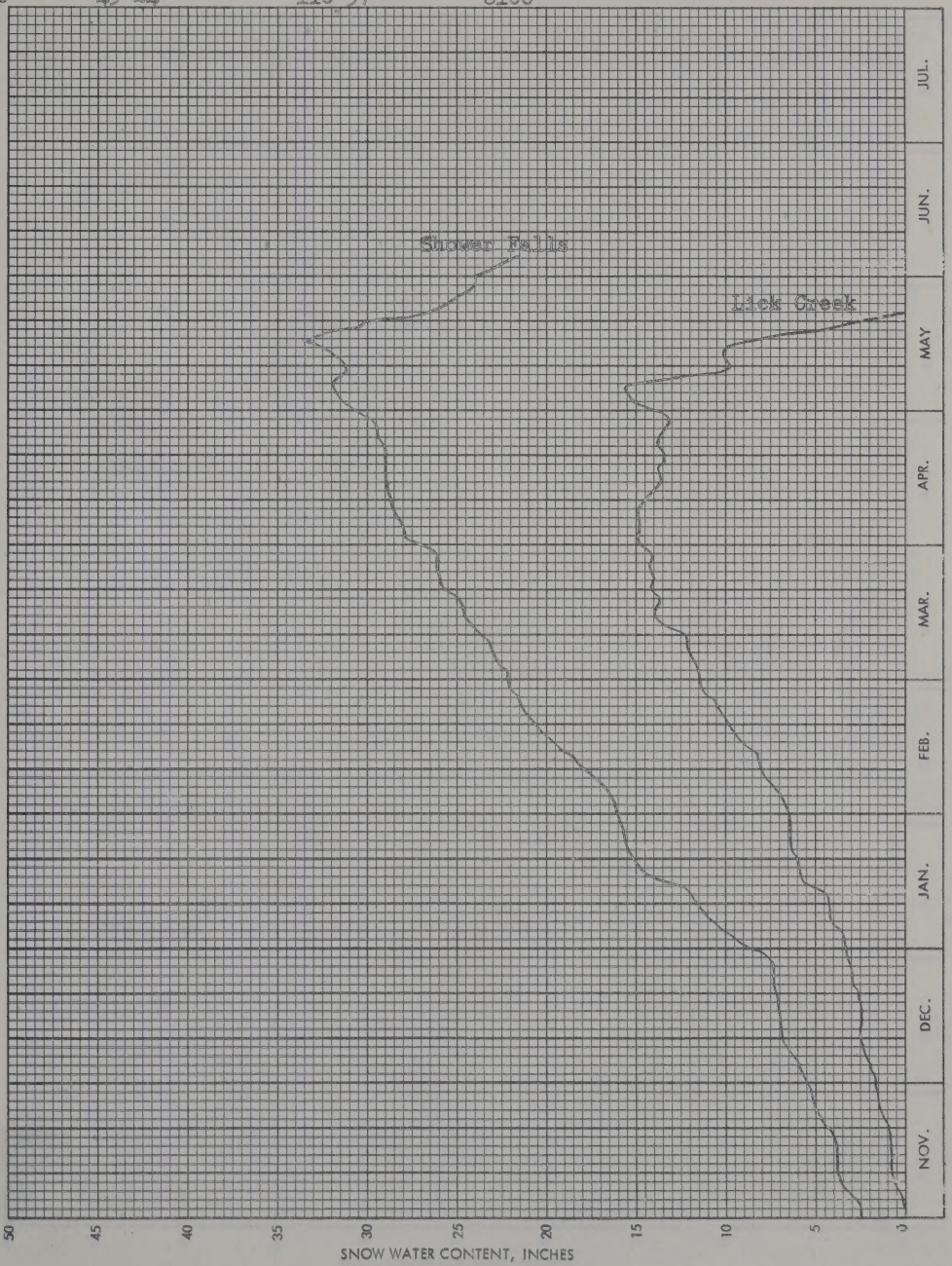


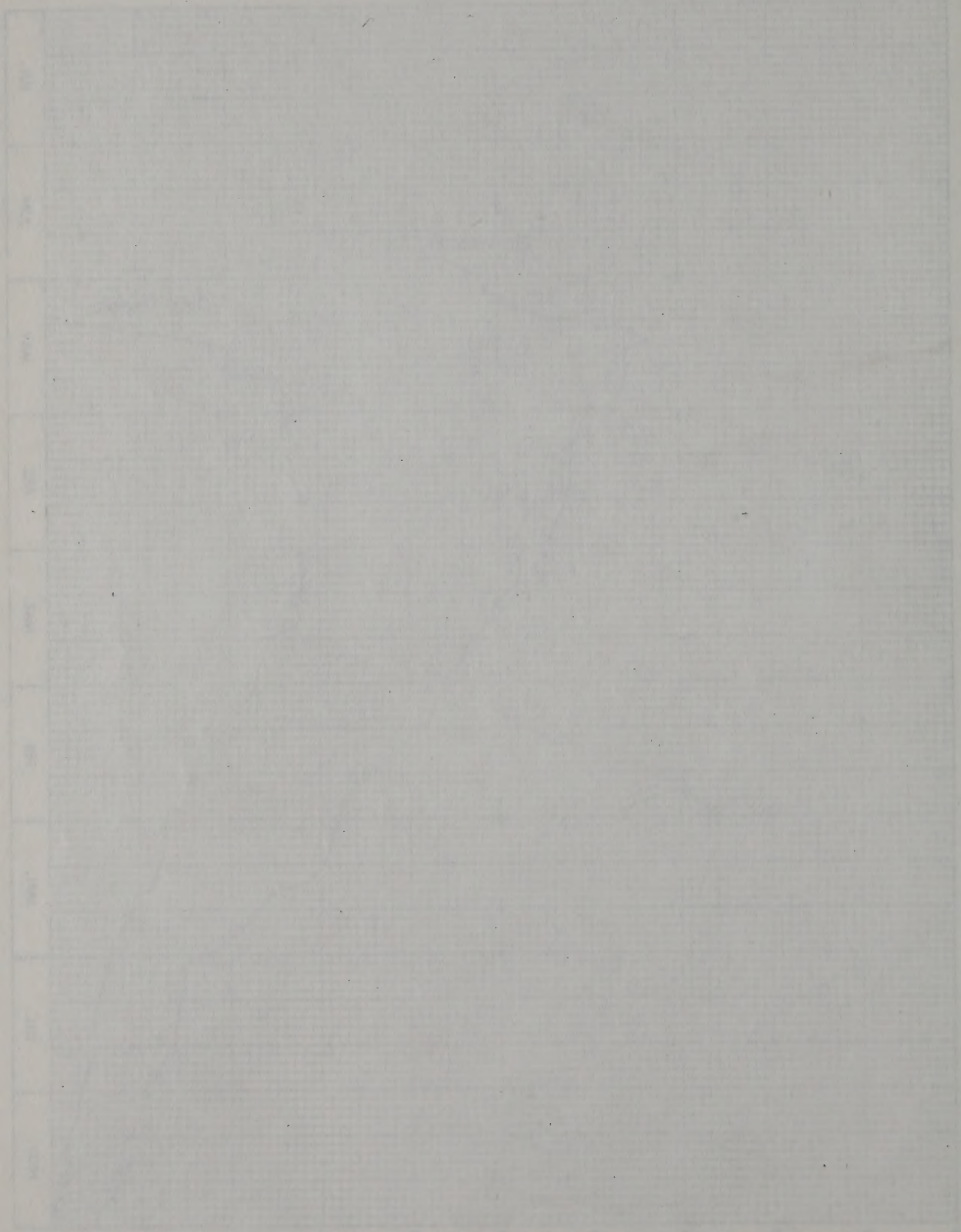


LICK CREEK & SHOWER FALLS
SNOW PILLOW DATA

AS OF JUNE 1, 1967

Lick Creek	Sec. 10	T. 4S	R. 6E	No. 10D13	Drainage: Gallatin
Shower Falls	14	5S	6E	10D16	
Lick Creek	Lat. 45-30	Long. 110-58	Elev. 6860
Shower Falls	45-24	110-57	8100





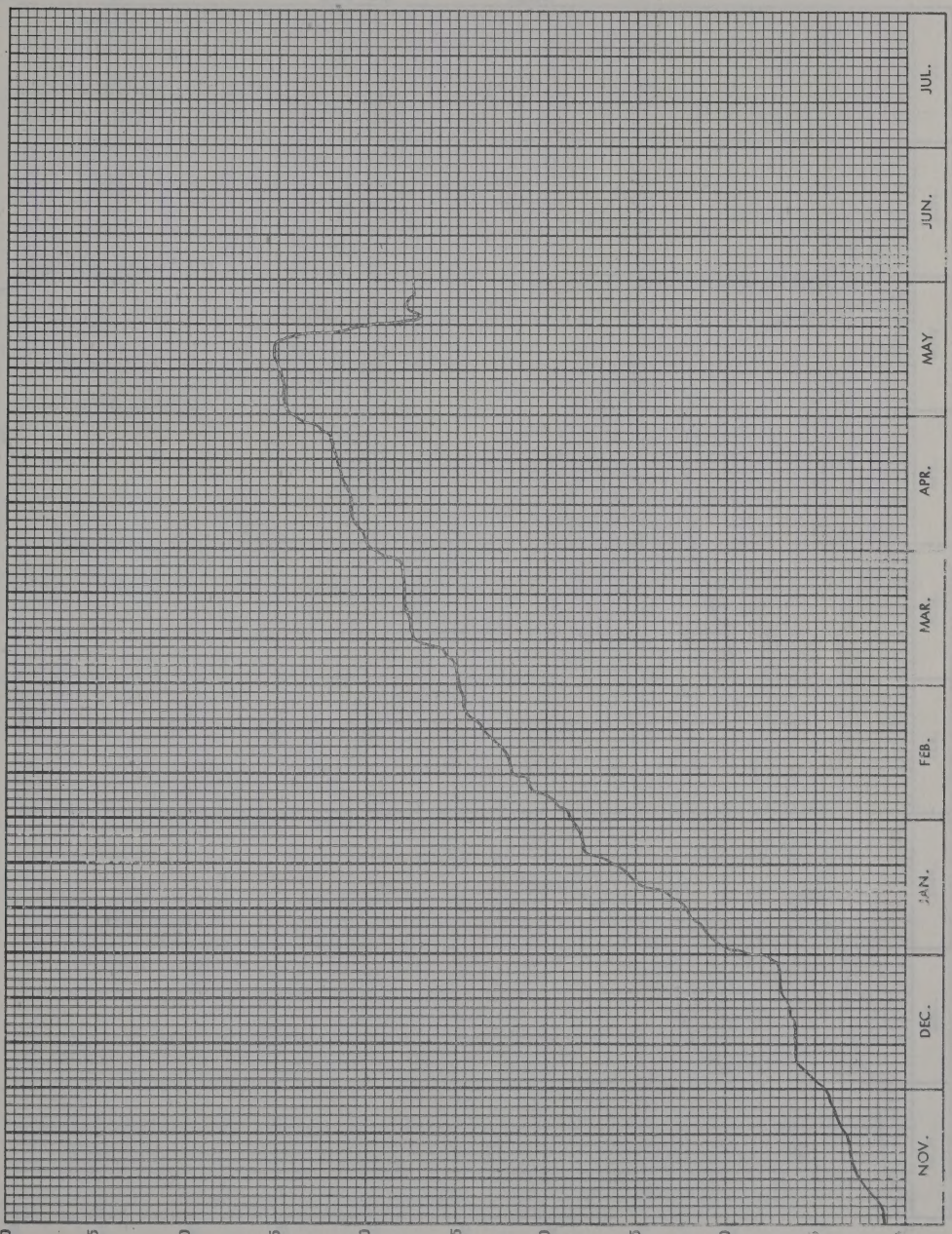
SPUR PARK

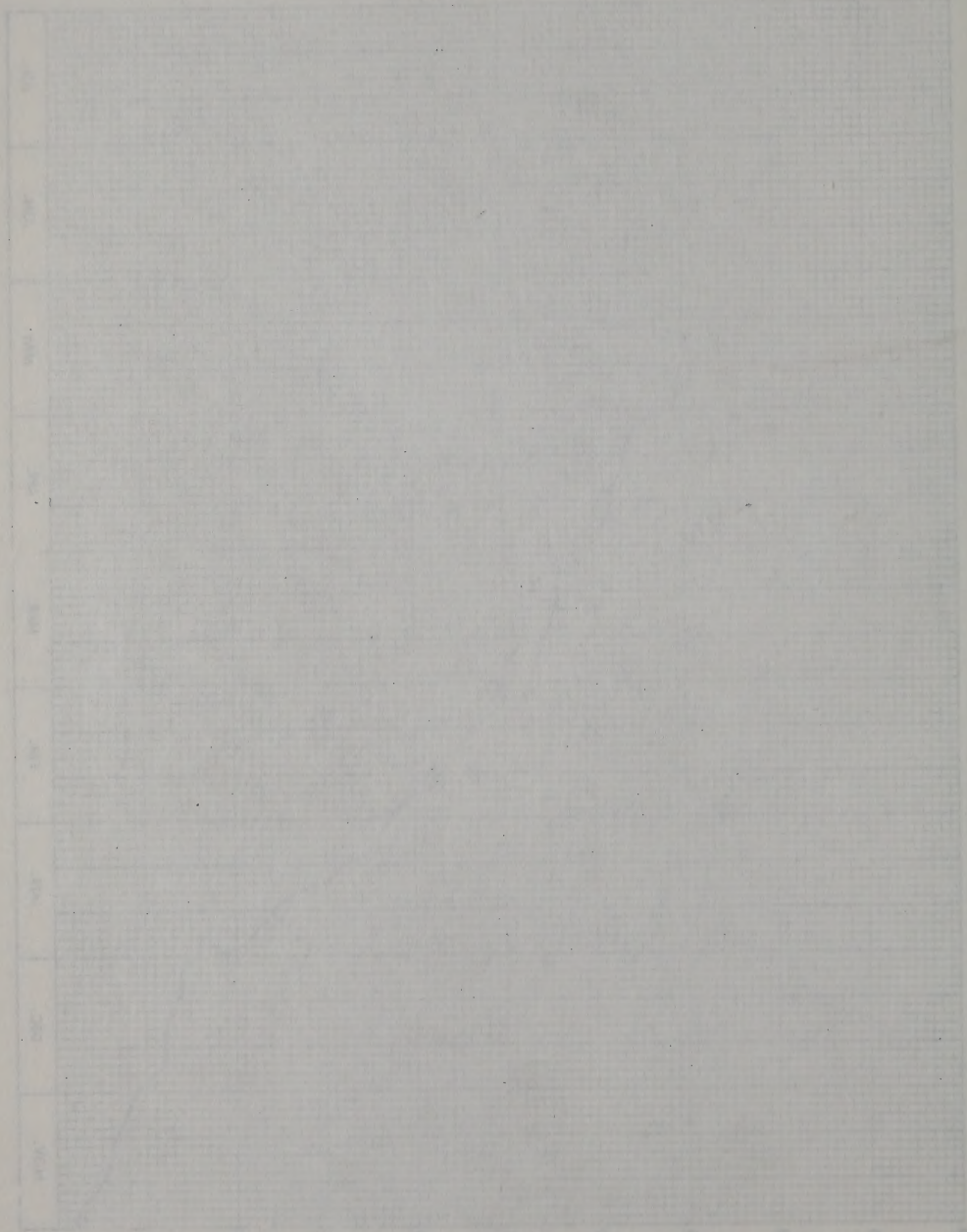
SNOW PILLOW DATA

AS OF JUNE 1, 1967

Sec. 20 T. 12N R. 9E No. 10006 Drainage: Judith

Lat. 46-47 Long. 110-37 Elev. 8000



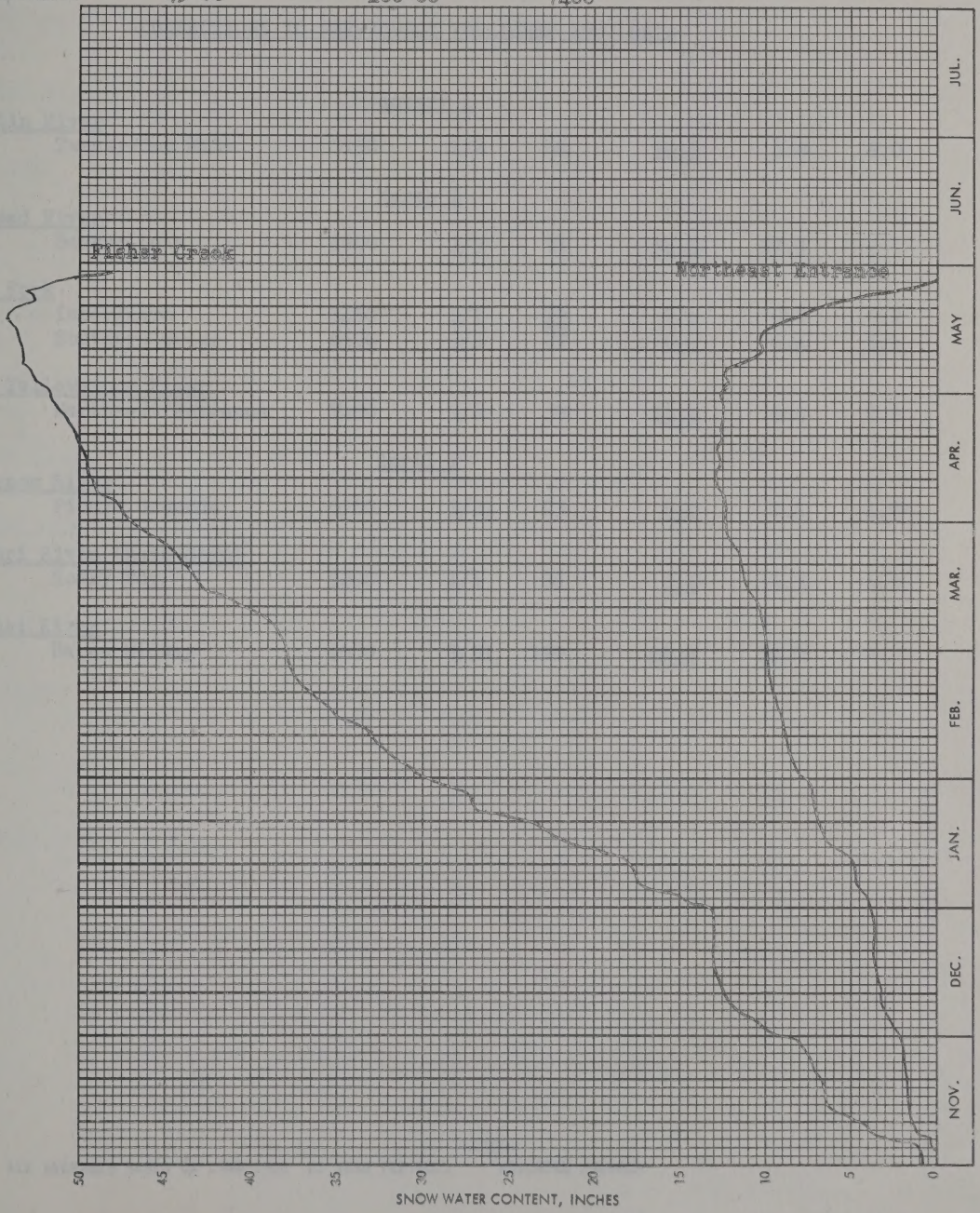


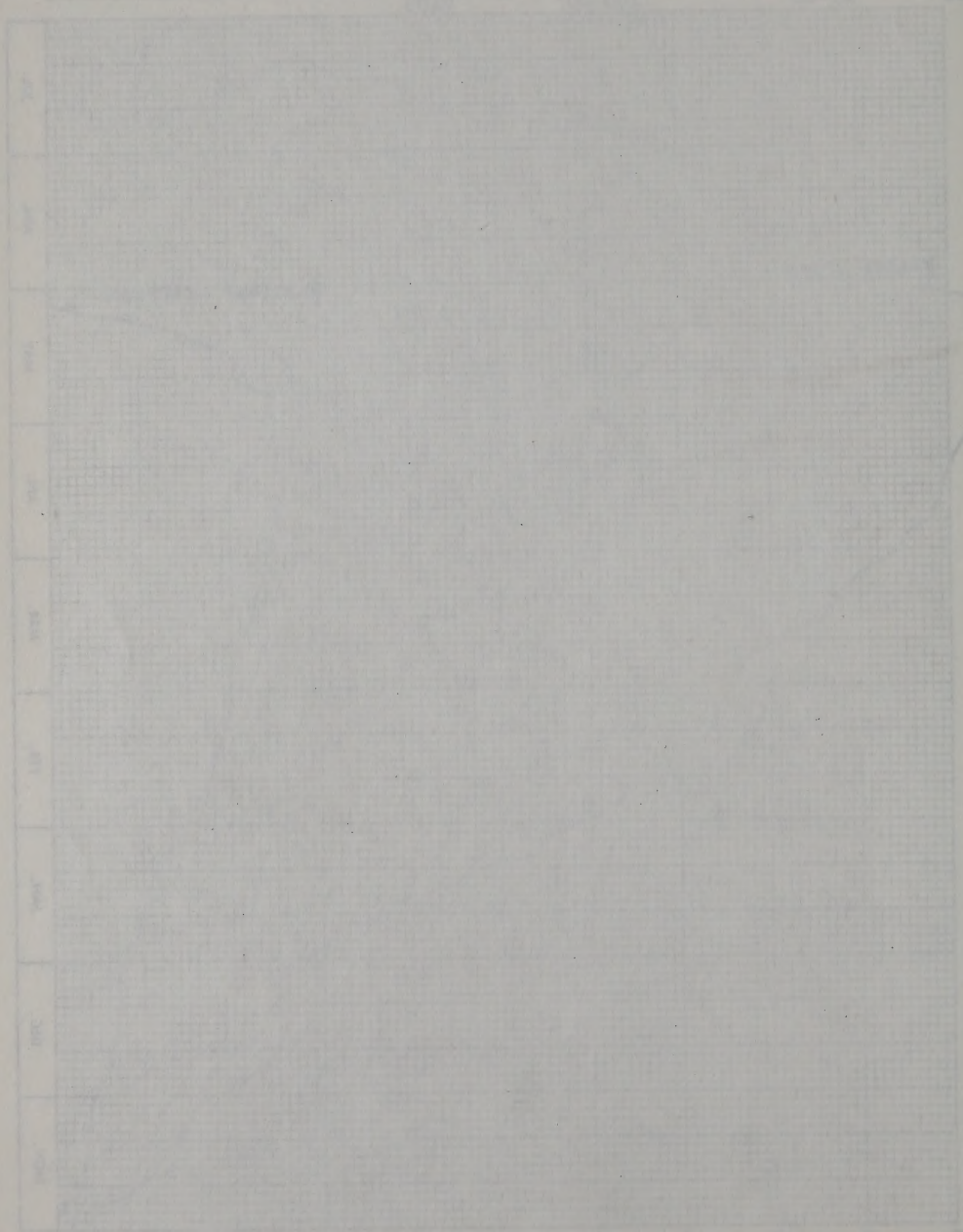
FISHER CREEK & N.E. ENTRANCE
SNOW PILLOW DATA

AS OF JUNE 1, 1967

	Sec.	T.	R.	No.	Drainage
Fisher Creek	11	9S	14E	9D06	Yellowstone
N.E. Entrance	33	9S	14E	10D07	

	Lat.	Long.	Elev.
Fisher Creek	45-04	109-57	9100
N.E. Entrance	45-00	100-00	7400





SNOW SURVEY DATA

AS OF

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE

CORRECTIONS TO PREVIOUSLY PUBLISHED 1967 DATA

			January 1				
Gallatin River							
11E06	Twenty-One Mile	7150	1/2	40	10.3	3.8	8.0
			March 1				
Flathead River							
13A11	Beaver Lake	5900	3/5	71	25.4	17.5	-
Clark Fork							
13C04	Intergaard	6450	3/1	29	8.6	5.7	7.2
13C05	Southern Cross	6500	3/1	27	8.2	5.4	5.6
Upper Yellowstone River							
10D07	Northeast Entrance	7400	3/6	39	11.1	5.0	7.5
			April 1				
Jefferson River							
12C06	Picnic Grounds	6500	3/31	23	6.0	2.4	4.8*
Missouri River (Main Stem)							
9A01	Rocky Boy	5200	4/1	31	8.4	3.3	4.3
Kootenai River							
15B16	Baree Midway	4600	3/31	120	46.8	35.0	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
Corrections to Previously Published 1967 Data - cont.							
			May 1				
Flathead River							
13A16	Mineral Creek	4000	5/1	53	22.2	9.4	-
Clark Fork							
13B10	Coyote Hill	4200	5/3	19	7.0	0.4	2.3
13C18	Spring Gulch	6000	4/30	23	6.4	0.0	3.1*
13C01	Stuart Mountain	7400	4/30	97	40.3	28.6	30.4*
14B01	TV Mountain	6800	4/29	62	22.5	17.6	20.3*
Beaverhead River							
13D09	Gold Stone	8100	5/2	68	22.0	9.9	-
Jefferson River							
12C09	Copper Mountain	7700	5/1	62	18.6	5.9	-
Madison River							
11E05	Hebgen Dam	6550	4/29	34	11.5	0.5	4.8
Missouri River (Main Stem)							
11C01	Boulder Mountain	7950	5/1	84	29.3	18.0	16.1*
10C07	Elk Peak	8000	5/2	82	28.7	17.2	16.5*
Sun-Marias-Teton Rivers							
12B07	Goat Mountain	7000	4/30	54	17.4	9.2	10.3*
Judith River							
9C02	Avalanche	7100	5/4	94	33.6	21.7	-
Upper Yellowstone							
9D07	Cooke Station	8150	5/2	72	28.6	15.5	-
Kootenai River							
15B11	Baree Creek	5500	5/1	149	65.6	41.0	49.1
15B16	Baree Midway	4600	5/1	116	51.2	24.8	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 15, 1967

(Inches)

SNOW COURSE NO.	SNOW COURSE NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE
	COLUMBIA RIVER BASIN						
KOOTENAI RIVER							
L5B11	Baree Creek	5500	5/15	131	65.5	26.7	42.3*
L5B16	Baree Midway	4600	5/15	90	44.4	17.5	-
L5B15	Baree Trail	3800	5/15	0	0.0	0.0	-
BC 10	Fernie	3500	5/15	2	0.7	0.0	-
BC 11	Glacier	4100	5/14	77	40.7	25.1	19.3*
L4A11	Graves Creek	4300	5/16	42	19.5	5.6	-
BC 43	Gray Creek	5100	5/14	68	29.7	16.2	17.6*
BC 33	Kicking Horse	5400	5/15	48	20.5	9.4	7.8*
BC 10B	Morrissey Ridge	6100	5/15	90	41.6	-	-
BC 10A	New Fernie	4100	5/15	26	11.4	0.6	-
L3A01	Red Mountain	6000	5/15	56	26.8	12.8	18.4*
BC 20A	Sullivan Mine	5100	5/15	38	18.0	5.4	6.8*
L4A07	Weasel Divide	5450	5/16	88	43.2	23.6	32.6*
FLATHEAD RIVER							
L3A11	Beaver Lake	5900	5/16	71	33.3	-	-
L3A17	Camp Misery	6400	5/17	136	68.2	-	-
L4A09	Griffin Creek Divide	5150	5/15	28	12.6	-	-
L3B12	Gunsight Lake	6300	5/16	119	58.6	-	-
L4A03	Hell Roaring Divide	5770	5/15	85	41.8	16.7	-
L3B13	Holbrook	4530	5/16	0	0.0	-	-
L3A05	Marias Pass	5250	5/15	55	24.8	-	-
L3A16	Mineral Creek	4000	5/14	37	16.5	-	-
L3B07	North Fork Jocko	6330	5/16	117	58.2	26.4	-
L3B01	Trinkus Lake	6100	5/16	112	57.9	-	-
L3B11	Twin Creeks	3580	5/16	0	0.0	-	-
L3B05	Upper Holland Lake	7000	5/16	103	50.6	-	-
CLARK FORK RIVER							
L3C13	Black Pine	7100	5/15	52	21.1	2.8	-
L3C13	Black Pine Pillow	7100	5/15	SP	22.8	4.4	-
L3C11	Fred Burr Pass	8000	5/17	85	37.1	-	-
L5C10	Hoodoo Basin Pillow	6000	5/15	SP	58.6	-	-
L3C04	Intergaard	6450	5/16	36	12.7	-	-
L5B02	Lookout	5250	5/15	93	41.1	-	-
L3C21	Lubrecht Forest No. 3	5450	5/13	13	4.5	-	-
L3C12	Red Lion	7100	5/17	54	21.6	-	-
L3C03	Skalkaho Summit	7260	5/17	74	33.1	12.4	23.0*
L3C18	Spring Gulch	6000	5/14	16	5.8	-	-
L3C01	Stuart Mountain	7400	5/14	91	40.5	17.5	-
L4B01	TV Mountain	6800	5/13	54	20.6	-	-

SP - Snow pillow observation - water content only.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 15, 1967

Map No.	Snow Course	Elevation	Date of Survey	Depth of Snowpack	Water Content	Last Year's Water Content	Percent of Last Year
	COLUMBIA RIVER BASIN						
	NORTHERN RIVERS						
1011	Horse Creek	3500	5/15	121	63.5	70.7	62.3*
1010	Horse Midway	4400	5/15	90	44.4	17.5	-
1015	Horse Trail -	3800	5/16	0	0.0	0.0	-
10	Jarvis	3500	5/16	2	0.7	0.0	-
11	Glacier	4300	5/16	77	43.7	85.1	19.3*
41	Grave Creek	4200	5/16	45	19.3	5.0	-
43	Grey Creek	3500	5/04	64	30.7	0.2	17.0*
33	Kicking Horse	5400	5/15	42	20.5	0.4	7.8*
108	Moorehead Ridge	6100	5/15	60	41.6	-	-
104	New Fernie	4200	5/16	25	11.4	6.5	-
101	Red Mountain	5000	5/18	40	25.8	12.5	18.4*
204	Sullivan Mine	6100	5/15	34	18.0	5.4	6.9*
107	Weasel Divide	5400	5/16	80	42.4	23.6	30.0*
	KOOTENAY RIVER						
211	Beaver Lake	7900	5/16	72	33.3	-	-
210	Deep Misery	6400	5/17	108	48.2	-	-
209	Griffin Creek Divide	7150	5/14	24	12.5	-	-
212	Gunsight Lake	6300	5/16	119	56.6	-	-
207	Hell Roaring Divide	5700	5/15	85	41.8	20.7	-
213	Holbrook	4500	5/16	0	0.0	-	-
205	Mertlas Pass	5600	5/15	46	24.8	-	-
216	Mineral Creek	4000	5/14	27	10.5	-	-
217	North Fork Lodge	6100	5/16	137	54.2	26.4	-
201	Trident Lake	6100	5/16	172	77.9	-	-
214	Twin Creeks -	3500	5/16	0	0.0	-	-
202	Upper Hellgate Lake	7000	5/16	103	50.0	-	-
	NORTH FORK RIVER						
219	Black Pine	7100	5/14	52	22.3	9.8	-
218	Black Pine Valley	7200	5/15	58	22.8	4.4	-
111	Fred Burr Pass	8000	5/17	86	37.1	-	-
110	Hoodoo Basin Pillow	6900	5/15	59	28.0	-	-
104	Interpeard	6400	5/10	36	12.9	-	-
102	Lookout	5500	5/15	81	41.1	-	-
121	Lubrecht Forest No. 5	3400	5/12	12	4.8	-	-
112	Red Lion	7100	5/17	34	22.6	-	-
109	Skalkaho Summit	7500	5/17	74	33.1	12.4	23.0*
118	Spring Gulch	6000	5/14	20	5.8	-	-
101	Stuart Mountain	7100	5/14	70	40.3	17.8	-
201	TT Mountain	6800	5/13	54	20.6	-	-

* - Snow pillow observation - water content only.

SNOW SURVEY DATA

AS OF MAY 15, 1967

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
BITTERROOT RIVER							
13D02	Gibbons Pass	7100	5/15	67	28.8	2.6	20.1*
14C07	Lost Horse	5940	5/16	78	36.3	11.8	-
13D22	Saddle Mountain	7940	5/15	82	36.6	12.4	-
14C08	Twin Lakes	6510	5/16	108	49.3	21.4	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 15, 1967

(Inches)

SNOW COURSE NO.	SNOW COURSE NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE
	MISSOURI RIVER BASIN						
	BEAVERHEAD RIVER						
11E04	Lakeview Canyon	6930	5/11	46	18.4	-	-
11E03	Lakeview Ridge	7400	5/11	44	17.0	-	-
	JEFFERSON RIVER						
12C09	Copper Mountain	7700	5/15	59	20.5	-	-
12C10	Nez Perce Creek	6500	5/15	27	8.6	-	-
	MADISON RIVER						
11E05	Hebgen Dam	6550	5/13	19	7.7	-	-
10E02	Norris Basin	7500	5/15	30	12.2	-	-
11E07	West Yellowstone	6700	5/13	25	11.1	-	-
11E07	West Yellowstone Pillow	6700	5/15	SP	9.4	-	-
	GALLATIN RIVER						
10D14	Arch Falls	7350	5/15	48	19.0	7.2	-
10D15	Bridger Bowl Pillow	7250	5/16	SP	36.1	15.7	-
10D04	Devil's Slide	8100	5/15	84	32.4	19.5	-
10D03	Hood Meadow	6600	5/15	25	10.5	0.0	-
10D13	Lick Creek Pillow	6860	5/15	SP	9.8	0.0	-
10D18	Maynard Creek Pillow	6210	5/16	SP	15.4	-	-
10D16	Shower Falls Pillow	8100	5/15	SP	33.1	22.9	-
11E06	Twenty-One Mile	7150	5/13	59	25.5	-	-
	MISSOURI RIVER (Main Stem)						
10C09	Deadman Creek	6450	5/15	33	15.0	0.0	-
10C01	Kings Hill	7500	5/15	60	23.6	8.2	-
12C02	Ten Mile Lower	6600	5/15	34	12.2	-	-
12C03	Ten Mile Middle	6800	5/15	49	19.3	-	-
12C04	Ten Mile Upper	8000	5/15	58	23.4	-	-
	SUN-TETON-MARIAS RIVERS						
13A15	Badger Pass	6900	5/16	114	54.3	-	-
12A01	Freight Creek	6000	5/16	51	25.4	-	-
12B07	Goat Mountain	7000	5/15	44	16.9	-	-
12B04	Wrong Creek	5700	5/16	36	18.5	-	-
12B03	Wrong Ridge	6800	5/16	59	29.1	-	-

SP - Snow pillow observation - water content only.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 15, 1957

SNOW COURSE			CURRENT DATA			POST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	LAST YEAR / AVERAGE

MISSOURI RIVER BASIN

MADISON RIVER

MD01	Lakeview Canyon	8930	5/21	45	18.4	-	-
MD03	Lakeview Ridge	7200	5/11	41	17.0	-	-

JEFFERSON RIVER

MJ09	Copper Mountain	7750	5/15	39	20.3	-	-
MJ10	Hot Springs Creek	6500	5/15	27	8.0	-	-

GALLATIN RIVER

MG05	Hedges Gap	6550	5/13	19	7.7	-	-
MG02	Horse Basin	7500	5/15	30	12.2	-	-
MG07	West Yellowstone	6700	5/13	25	11.1	-	-
MG07	West Yellowstone Pillow	6700	5/15	32	9.4	-	-

MADISON RIVER

MM14	Arch Falls	7350	5/15	48	19.0	7.2	-
MM15	Bridger Bowl Pillow	7250	5/16	32	36.1	15.7	-
MM04	Devil's Slide	8100	5/15	84	32.4	19.5	-
MM03	Hood Meadow	6600	5/15	25	10.5	0.0	-
MM13	Link Creek Pillow	6860	5/15	32	9.8	0.0	-
MM18	Maynard Creek Pillow	6210	5/16	32	15.4	-	-
MM16	Shower Falls Pillow	8100	5/15	32	33.1	22.9	-
MM06	Twenty-One Mile	7150	5/13	39	25.5	-	-

MISSOURI RIVER (Main Stem)

MC09	Deadman Creek	6620	5/15	32	15.0	0.0	-
MC01	Kings Hill	7500	5/15	60	23.6	8.2	-
MC02	Ten Mile Lower	6600	5/15	34	12.2	-	-
MC03	Ten Mile Middle	6800	5/15	49	19.3	-	-
MC04	Ten Mile Upper	8000	5/15	58	23.4	-	-

SUN-TETON-MEDICAS RIVERS

MA15	Badger Pass	6900	5/16	114	54.3	-	-
MA01	Freight Creek	6000	5/16	51	25.4	-	-
MB07	Goat Mountain	7000	5/15	44	16.9	-	-
MB04	Wrong Creek	5700	5/16	36	18.5	-	-
MB03	Wrong Ridge	6800	5/16	59	29.1	-	-

P - Snow pillow observation - water content only.

NOTE: All average data on last-year (1956) line are for 1951-1956. ADDISON AVENUE

SNOW SURVEY DATA

AS OF MAY 15, 1967

(Inches)

SNOW COURSE NO.	SNOW COURSE NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE
UDITH RIVER							
9C02	Avalanche	7100	5/15	84	36.3	-	-
9C01	Crystal Lake	6100	5/15	41	18.8	-	-
9C03	Rock Creek	5600	5/15	24	11.4	-	-
.0C06	Spur Park	8000	5/15	86	36.0	17.8	-
.0C06	Spur Park Pillow	8000	5/15	SP	35.3	-	-
PPER YELLOWSTONE RIVER							
9D01	Camp Senia	7890	5/15	36	12.4	4.8	-
0E03	Canyon	7750	5/14	54	21.8	-	-
D07	Cooke Station	8150	5/16	65	28.8	-	-
9D06	Fisher Creek	9100	5/16	126	54.3	-	-
9D06	Fisher Creek Pillow	9100	5/16	SP	54.4	-	-
.0E04	Lake Camp	7850	5/17	30	11.9	-	-
.0E01	Lupine Creek	7300	5/14	38	14.6	-	-
.0D07	Northeast Entrance	7400	5/16	26	10.6	-	-
.0D07	Northeast Entrance Pillow	7350	5/16	SP	10.6	-	-
.0D10	Sacajawea	6550	5/16	37	16.5	-	-
9D04	Timberline Creek	8850	5/15	63	24.2	13.3	-
9D08	White Mill	8700	5/16	94	40.3	-	-

P - Snow pillow observation - water content only.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 15, 1957

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	LAST YEAR

SOUTH RIVER

SC02	Avalanche	7100	5/15	84	36.3	-	-
SC01	Crystal Lake	6100	5/15	41	18.8	-	-
SC03	Rock Creek	5600	5/15	24	11.4	-	-
SC06	Spur Park	8000	5/15	85	36.0	17.8	-
SC05	Spur Park Pillow	8000	5/15	87	35.3	-	-

UPPER YELLOWSTONE RIVER

UC01	Camp Davis	7850	5/15	35	12.4	4.8	-
UC03	Canyon	7750	5/14	54	21.8	-	-
UC07	Cooke Station	8150	5/16	65	28.8	-	-
UC06	Fisher Creek	9100	5/16	126	54.3	-	-
UC05	Fisher Creek Pillow	9100	5/16	87	54.4	-	-
UC04	Lake Camp	7850	5/17	30	11.9	-	-
UC02	Lupine Creek	7300	5/14	38	14.6	-	-
UC07	Northeast Entrance	7400	5/16	26	10.6	-	-
UC07	Northeast Entrance Pillow	7350	5/16	27	10.6	-	-
UC10	Seanjawea	6550	5/16	37	16.5	-	-
UC04	Timberline Creek	8250	5/15	63	24.2	13.3	-
UC08	White Mill	8700	5/16	96	40.3	-	-

* - Snow pillow observation - water content only.

SNOW SURVEY DATA

AS OF JUNE 1, 1967

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
	COLUMBIA RIVER BASIN						
KOOTENAI RIVER							
BC 11	Glacier	4100	5/29	50	26.2	15.4	8.4*
14A11	Graves Creek	4300	6/2	10	4.6	0.0	-
BC 43	Gray Creek	5100	5/28	44	20.1	12.3	9.5*
BC 32	Marble Canyon	5000	5/29	8	3.4	0.0	-
15A01	Red Mountain	6000	6/2	18	10.2	0.8	6.6*
14A07	Weasel Divide	5450	6/1	56	31.5	8.6	-
FLATHEAD RIVER							
13B03	Big Creek	6750	6/2	87	49.6	23.3	42.5*
13A17	Camp Misery	6400	5/29	108	55.7	-	-
13A02	Desert Mountain	5600	5/31	0	0.0	0.0	-
13B04	Fatty Creek	5500	6/2	27	14.8	0.0	6.0*
14A03	Hell Roaring Divide	5770	5/31	41	23.3	-	-
13B07	North Fork Jocko	6330	6/1	76	42.0	7.4	30.3*
CLARK FORK RIVER							
13C13	Black Pine	7100	5/31	18	8.0	0.0	-
13C13	Black Pine Pillow	7100	5/31	SP	10.2	0.0	-
14C10	Heart Lake Trail	4800	5/26	20	9.4	-	-
15C10	Hoodoo Basin Pillow	6000	6/1	SP	40.2	-	-
15C01	Hoodoo Creek	5900	5/26	100	47.6	-	-
15B02	Lookout	5250	6/1	47	22.8	0.0	-
13C03	Skalkaho Summit	7260	5/31	41	23.4	1.2	14.1*
13C01	Stuart Mountain	7400	6/3	39	20.3	7.4	20.4*
14B01	TV Mountain	6800	6/3	18	8.0	1.9	-
BITTERROOT RIVER							
13D02	Gibbons Pass	7100	5/29	30	15.4	0.0	6.7*
14C07	Lost Horse	5940	5/28	54	26.6	3.0	-
13D22	Saddle Mountain	7940	5/29	49	25.7	0.0	-
14C08	Twin Lakes	6510	5/28	75	39.0	9.4	-

SP - Snow pillow observation - water content only.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF JUNE 1, 1957

SC.	SNOW COURSE: NAME	ELEVATION	DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE

COLUMBIA RIVER BASIN

KOOTENAI RIVER

BC 11	Glacier	4100	5/29	50	20.2	15.4	8.4*
12A21	Graves Creek	4300	6/2	10	4.6	0.0	-
BC 43	Gray Creek	3100	5/28	44	20.1	12.3	9.5*
BC 32	Marble Canyon	5000	5/29	8	3.4	0.0	-
13A01	Red Mountain	6000	6/2	18	10.2	0.8	6.5*
12A07	Wasnel Divide	5450	6/1	56	31.5	8.6	-

FLATHEAD RIVER

13B03	Big Creek	6750	6/2	87	49.6	23.3	42.5*
13A17	Camp Misery	6200	5/30	108	59.7	-	-
13A02	Desert Mountain	5600	5/31	0	0.0	0.0	-
13B04	Fatty Creek	5500	6/2	27	14.8	0.0	6.0*
13A03	Hell Roaring Divide	5770	5/31	41	23.3	-	-
13B07	North Fork Jocko	6330	6/1	76	42.0	7.4	30.3*

CLARK FORK RIVER

13C13	Black Pine	7100	5/31	18	8.0	0.0	-
13C13	Black Pine Pillow	7100	5/31	37	10.2	0.0	-
14C10	Heart Lake Trail	4800	5/26	20	9.4	-	-
13C10	Hoodoo Basin Pillow	6000	6/1	89	40.2	-	-
13S01	Hoodoo Creek	5900	5/26	100	47.6	-	-
13S02	Lookout	5250	6/1	47	22.8	0.0	-
13C03	Skalkaho Summit	7260	5/31	41	23.4	1.2	14.1*
13C01	Stuart Mountain	7400	6/1	39	20.3	7.4	20.1*
12S01	TV Mountain	6800	6/1	18	8.0	1.9	-

BITTERROOT RIVER

13D02	Gibbons Pass	7100	5/29	30	15.4	0.0	6.7*
14C07	Lost Horse	5540	5/29	64	26.6	3.0	-
13D22	Saddle Mountain	7940	5/29	49	25.7	0.0	-
14C08	Twin Lakes	6710	5/28	95	39.0	9.4	-

BP - Snow pillow observation - water content only.

NOTE: ALL AVERAGES BASED ON 1942-1956 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF JUNE 1, 1967

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
	MISSOURI RIVER BASIN						
MADISON RIVER							
11E25	Freezeout Lake	7200	5/25	0	0.0	-	-
11E26	Freezeout Mountain	8250	5/25	34	15.4	-	-
11E22	Lake Creek	6100	5/25	0	0.0	-	-
11E28	Lion Mountain Pillow	8760	5/25	SP	14.1	-	-
11E23	Meridian Creek	7000	5/25	2	0.8	-	-
11E24	Tepee Creek	8000	5/25	35	14.4	-	-
11E27	Upper West Fork	8750	5/25	26	11.0	-	-
11E07	West Yellowstone Pillow	6700	5/30	0	0.0	-	-
GALLATIN RIVER							
10D14	Arch Falls	7350	6/1	20	9.0	1.4	-
10D15	Bridger Bowl Pillow	7250	5/30	SP	22.6	2.1	-
10D04	Devil's Slide	8100	6/1	51	24.0	14.5	-
10D03	Hood Meadow	6600	6/1	0	0.0	0.0	-
10D13	Lick Creek Pillow	6860	5/25	SP	0.0	0.0	-
10D18	Maynard Creek Pillow	6210	5/31	SP	4.1	-	-
10D16	Shower Falls Pillow	8100	6/1	SP	23.6	15.6	-
11D13	Taylor Peaks Pillow	8500	Delayed report				
MISSOURI RIVER (Main Stem)							
10C09	Deadman Creek	6450	5/31	0	0.0	0.0	-
10C01	Kings Hill	7500	5/31	32	15.5	0.4	-
JUDITH RIVER							
9C02	Avalanche	7100	5/31	50	24.4	-	-
9C01	Crystal Lake	6100	5/31	0	0.0	-	-
9C03	Rock Creek	5600	5/31	0	0.0	-	-
10C06	Spur Park	8000	5/31	56	29.2	8.0	0
10C06	Spur Park Pillow	8000	5/31	SP	27.4	-	-

SP - Snow pillow observation - water content only.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF JUNE 1, 1957

No.	Name	Elevation	Snow Course	Date of Survey	Depth Current Survey	Depth Last Year	Past Record	
							Current Data	Last Year

MISSOURI RIVER BASIN

MADISON RIVER

11E25	Freezeout Lake	7800	5/25	0	0.0	-	-
11E26	Freezeout Mountain	8250	5/25	34	15.4	-	-
11E22	Lake Creek	6100	5/25	0	0.0	-	-
11E28	Lion Mountain Pillow	8700	5/25	SP	14.1	-	-
11E23	Meridian Creek	7000	5/25	2	0.8	-	-
11E24	Tepee Creek	8000	5/25	15	14.4	-	-
11E27	Upper West Fork	8750	5/25	26	11.0	-	-
11E07	West Yellowstone Pillow	6700	5/30	0	0.0	-	-

GALLATIN RIVER

10D14	Arch Mills	7350	6/1	20	9.0	1.4	-
10D15	Bridger Bowl Pillow	7300	5/30	SP	22.6	2.1	-
10D04	Devil's Slide	6100	6/1	21	24.0	14.5	-
10D09	Hood Meadow	6600	6/1	0	0.0	0.0	-
10D13	Link Creek Pillow	6840	5/25	SP	0.0	0.0	-
10D18	Maynard Creek Pillow	6210	5/31	SP	4.1	-	-
10D16	Shower Falls Pillow	8100	6/1	SP	25.6	15.6	-
11D13	Taylor Peaks Pillow	8500	Delayed report				

MISSOURI RIVER (Main Stem)

10C09	Deadman Creek	6450	5/31	0	0.0	0.0	-
10C01	Elbow Hill	7500	5/31	32	15.5	0.4	-

JEFFIN RIVER

9C02	Avalanche	7200	5/31	50	24.4	-	-
9C01	Crystal Lake	6100	5/31	0	0.0	-	-
9C03	Rock Creek	5600	5/31	0	0.0	-	-
10C06	Spur Park	8000	5/31	50	29.2	8.0	0
10C06	Spur Park Pillow	8000	5/31	SP	27.4	-	-

SP - Snow pillow observation - water content only.

NOTE: ALL AVERAGES BASED ON 1952-1956 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF JUNE 1, 1967

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
UPPER YELLOWSTONE RIVER							
9D01	Camp Senia	7890	5/31	10	3.9	0.0	-
9D07	Cooke Station	8150	5/29	37	18.2	-	-
9D06	Fisher Creek	9100	5/29	94	45.9	-	-
9D06	Fisher Creek Pillow	9100	5/29	SP	47.2	-	-
10D06	Independence	8000	6/2	22	10.5	-	-
10D12	Monument Peak	9000	6/2	57	31.2	-	-
10D07	Northeast Entrance	7400	5/29	2	0.9	-	-
10D07	Northeast Entrance Pillow	7350	5/29	0	0.0	-	-
9D04	Timberline Creek	8850	5/31	32	12.4	4.3	-
9D08	White Mill	8700	5/29	67	33.2	-	-
JEFFERSON RIVER							
12C09	Copper Mountain	7700	6/1	13	4.8	-	-

SP - Snow pillow observation - water content only.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SOIL MOISTURE DATA

AS OF

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE

ADDITIONS AND CORRECTIONS TO PREVIOUSLY PUBLISHED 1967 DATA

January 1

Kootenai								
14A10M	Murphy Lake R.S.	3000	48	22.6	1/5	20.3	19.3	-
15A02M	Raven R.S.	3050	48	23.0	1/3	21.2	19.7	-
Missouri Main Stem								
10C01M	Kings Hill	7420	48	11.8	1/5	5.2	9.1	8.2

February 1

Clark Fork								
13C15M	Georgetown Lake	6450	48	9.0	1/31	4.7	3.7	-

March 1

Clark Fork								
13C15M	Georgetown Lake	6450	48	9.0	2/27	5.2	3.6	3.0
13B19M	Seeley Lake R.S.	4030	48	11.9	3/7	10.3	9.9	-
Gallatin								
11E06M	Twenty-One Mile	7150	48	10.0	2/28	2.8	3.0	2.8
Yellowstone								
10D11M	Battle Ridge	6020	48	17.6	3/1	13.9	13.0	12.9
10D07M	Northeast Entrance	7350	48	9.4	3/8	5.2	7.5	7.1

April 1

Gallatin								
10D15M	Bridger Bowl	7250	48	17.0	3/31	15.5	16.7	-

May 1

Clark Fork								
13C13M	Black Pine	7100	48	10.0	4/27	7.2	5.5	-

**AVERAGE FOR PERIOD OF RECORD

SOIL MOISTURE DATA

AS OF JUNE 1, 1967

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
COLUMBIA RIVER BASIN								
Kootenai								
15B15M	Baree Trail	3800	48	7.5	5/31	6.3	-	-
14A10M	Murphy Lake R.S.	3000	48	22.6			22.1	-
15A02M	Raven R.S.	3050	48	23.0	5/31	22.0	-	-
Flathead								
13A02M	Desert Mountain	5600	54	8.4	5/31	9.8	8.9	8.8
13A05M	Marias Pass	5250	54	6.5	5/31	6.2	6.1	5.8
Clark Fork								
13C13M	Black Pine	7100	48	10.0	5/31	9.2	8.2	-
13C15M	Georgetown Lake	6450	48	9.0	6/1	10.0	8.3	7.9
13B19M	Seeley Lake R.S.	4030	48	11.9	6/5	11.5	-	10.3
13C03M	Skalkaho Summit	7260	48	10.8	5/31	10.1	9.8	-
Bitterroot								
13D18M	Gibbons Pass	7100	48	7.1	5/29	6.8	6.8	7.0
14C05M	Lolo Pass	5250	48	10.6	5/29	9.6	9.8	10.4
MISSOURI RIVER BASIN								
Beaverhead								
11E13M	Lakeview	6700	48	15.3	6/1	15.6	13.8	14.7
Madison								
11D04M	Red Bluff	4800	40	4.7	6/1	1.8	2.1	2.4
11E07M	West Yellowstone	6700	48	6.5	5/28	3.2	-	-
Gallatin								
10D15M	Bridger Bowl	7250	48	15.8	5/30	15.5	16.5	-
11D02M	College Site	4856	54	14.5	6/2	10.9	13.7	11.2
10D13M	Lick Creek	6860	48	18.8	6/1	19.2	18.7	-
11E06M	Twenty-One Mile	7150	48	10.0	5/28	10.3	9.6	9.9
Missouri Main Stem								
10C01M	Kings Hill	7420	48	11.8	5/31	11.0	11.0	10.9
12C08M	Stemple Pass	6350	48	5.9	5/29	5.1	5.0	5.2
Yellowstone								
10D11M	Battle Ridge	6020	48	17.6	5/31	16.5	15.1	15.3
10D07M	Northeast Entrance	7350	48	9.4	5/29	9.1	9.7	9.1

**AVERAGE FOR PERIOD OF RECORD

SOIL MOISTURE DATA

AS OF JUNE 1, 1967

(Inches)

SO.	NAME	ELEVATION	SOIL MOISTURE STATUS				
			DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR
			SOIL PROFILE		CURRENT DATA		PAST RECORD

COLUMBIA RIVER BASIN

Kootenai

15B13M	Berne Trail	3800	4S	7.5	5/31	6.3	-
14A10M	Murphy Lake R.S.	3000	4S	22.6			22.1
15A02M	Raven R.S.	3050	4S	23.0	5/31	22.0	-

Flathead

13A02M	Desert Mountain	5600	5S	8.4	5/31	9.8	8.9
13A05M	Marias Pass	5250	5A	6.5	5/31	6.2	6.1

Clark Fork

13C13M	Black Pine	7100	4S	10.0	5/31	9.2	8.2
13C15M	Georgetown Lake	6450	4A	9.0	6/1	10.0	8.3
13B19M	Seeley Lake R.S.	4030	4A	11.9	6/5	11.5	-
13C03M	Skalkaho Summit	7260	4S	10.8	5/31	10.1	9.8

Battlecreek

13D18M	Gibbons Pass	7100	4S	7.1	5/29	6.8	6.8
14A05M	Lolo Pass	5250	4S	10.6	5/29	9.6	9.8

MISSOURI RIVER BASIN

Beaverhead

11E13M	Lakeview	6700	4S	15.3	6/1	15.6	13.8

Madison

11D01M	Red Bluff	4800	4O	4.7	6/1	1.8	2.1
11B07M	West Yellowstone	6700	4S	6.5	5/28	3.8	-

Gallatin

10D15M	Bridger Bowl	7250	4S	15.8	5/30	18.5	16.5
11D02M	College Site	4850	5A	14.5	6/2	10.9	13.7
10D13M	Lick Creek	6860	4S	18.8	6/1	19.2	18.7
11E00M	Twenty-One Mile	7150	4S	10.0	5/28	10.1	9.6

Missouri Main Stem

10D01M	Kings Hill	7420	4S	11.8	5/31	11.0	11.0
12D08M	Steample Pass	6350	4S	5.9	5/29	5.1	5.0

Yellowstone

10D11M	Battle Ridge	6020	4S	17.6	5/31	16.5	15.1
10D07M	Northeast Entrance	7150	4S	9.4	5/29	9.1	9.7

**AVERAGE FOR PERIOD OF RECORD

RESERVOIR STORAGE DATA

AS OF MAY 31, 1967

(1000 Acre Feet)

BASIN	RESERVOIR	USEABLE CAPACITY	USEABLE STORAGE THIS YEAR	USEABLE STORAGE LAST YEAR	USEABLE STORAGE AVERAGE
OLUMBIA RIVER BASIN					
lathead	Hungry Horse	3,428.0	2,076.0	3,046.0	2,793.6**
	Flathead Lake	1,791.0	1,400.0	1,509.0	1,559.2
	Camas (Sum of 4)	45.2	38.5	34.3	41.7
	Mission Valley (Sum of 8)	100.3	44.6	61.4	68.8
lark Fork	Georgetown Lake	31.0	22.0	21.7	24.0
	Noxon Rapids	334.6		292.4	-
itterroot	Como	34.9	24.2	27.8	29.0
	Painted Rocks	31.7	33.4	32.4	32.4
ISSOURI RIVER BASIN					
eaverhead	Clark Canyon	328.9	120.7	134.7	-
	Lima	84.0	43.9	70.1	58.1
uby	Ruby	38.8		-	35.4**
	Hebgen Lake	377.5	281.4	354.6	270.5
	Ennis Lake	41.0	38.6	39.4	35.6
allatin	Middle Creek	8.0		8.2	6.4**
issouri	Canyon Ferry	2,043.0	1,347.0	1,528.0	1,756.8**
	Hauser & Helena	61.9	59.6	59.0	53.2
	Lake Helena	10.4	9.6	9.4	7.6
	Holter Lake	81.9	74.0	77.4	72.8
	Smith River	10.7	10.8	-	8.7
	Ackley Lake	5.8		-	4.2
	Durand	7.0	6.6	-	6.4
	Martinsdale	23.1	14.9	-	15.0
	Deadman's Basin	72.2	68.2	-	46.8**
	Fort Peck	19,410.0	16,010.0	16,560.0	11,651.7
un	Gibson	105.0	94.3	95.0	94.4
	Willow Creek	32.3	21.8	27.3	27.0
	Pishkun	32.0	32.2	27.0	28.4
arias	Lower Two Medicine			-	9.0
	Four Horns	19.2	12.0	15.0	11.6
	Swift			-	29.6
	Lake Frances	112.0	96.8	100.9	104.4
	Tiber	1,347.0	632.8	752.9	729.5**
ilk	Fresno	127.2	127.8	105.1	107.1
	Nelson	66.8	53.5	54.7	40.7
	Lake Sherburne	66.1	14.0	31.8	35.2
ellowstone	Mystic Lake	20.8	11.7	6.0	6.3
	Tongue River	68.0	56.1	61.3	28.7
	Cooney	27.5	17.2	23.4	17.9**
ig Horn	Yellowtail	1,409.0	773.8	437.9	-

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). **AVERAGE FOR PERIOD OF RECORD

RESERVOIR STORAGE DATA

AS OF MAY 31, 1967

(1000 Acre Feet)

BASIN	RESERVOIR	USABLE CAPACITY	USABLE STORAGE THIS YEAR	USABLE STORAGE LAST YEAR	USABLE STORAGE AVERAGE
COLUMBIA RIVER BASIN					
Flathead	Hungry Horse	3,424.0	2,075.0	3,046.0	2,793.6**
	Flathead Lake	1,791.0	1,400.0	1,509.0	1,559.2
	Swan (Dam of 1)	45.4	38.5	34.3	41.7
Clark Fork	Noxon Rapids	335.0	100.3	44.6	68.8
	Georgetown Lake	31.0	22.0	21.7	24.0
	Noxon Rapids	334.6		282.4	-
Bitterroot	Como	36.9	24.2	27.8	29.0
	Painted Rocks	31.7	33.4	32.4	32.4
SNAKE RIVER BASIN					
Beaverhead	Clark Canyon	328.9	120.7	134.7	-
Big	Island	61.0	43.9	70.1	56.1
	Ruby	18.8		-	35.4**
Salmon	Redfish Lake	3777.5	2811.4	3914.8	2770.5
	Enaile Lake	41.0	36.6	39.4	35.6
Malad	Middle Creek	8.0		8.2	6.4**
Bear	Oneida Ferry	2,043.0	1,347.0	1,528.0	1,756.8**
	Hauser & Helena	61.9	59.6	59.0	53.2
	Lake Helena	10.4	9.6	9.4	7.6
	Holter Lake	81.9	74.0	77.4	72.8
	Smith River	10.7	10.8	-	8.7
	Ackley Lake	5.8		-	4.2
	Durand	7.0	6.6	-	6.4
	Martinsdale	23.1	14.9	-	15.0
	Deadman's Basin	72.2	68.2	-	46.8**
Green	Fort Peck	19,410.0	16,610.0	16,560.0	11,651.7
	Gibson	103.0	94.3	95.0	94.4
	Willow Creek	32.3	21.8	27.3	27.0
	Pishkun	34.0	32.2	27.0	28.4
Marias	Lower Two Medicine			-	9.0
	Four Horns	19.2	12.0	15.0	11.6
	Swift			-	29.6
	Lake Frances	112.0	96.8	100.9	104.4
Milk	Tiber	1,343.0	632.8	752.9	729.5**
	Fresno	127.2	127.8	109.1	107.1
	Nelson	66.8	53.5	54.7	40.7
Yellowstone	Lake Sherburne	66.1	14.0	31.8	35.2
	Hyalite Lake	20.8	11.7	6.0	6.3
	Tongue River	68.0	56.1	61.3	28.7
	Cooney	27.3	17.2	23.4	17.9**
Red Rock	Yellowtail	1,409.0	773.8	437.9	-

NOTE: ALL AVERAGES BASED ON 1958-1967 (10 YEAR PERIOD). **AVERAGE FOR PERIOD OF RECORD

Agencies Cooperating in Collecting Data Contained in this Bulletin

U. S. Forest Service
Region 1, Missoula, Montana

U. S. Geological Survey
Helena, Montana

U. S. Army Corps of Engineers
Portland, Oregon
Seattle, Washington
Omaha, Nebraska

U. S. Indian Irrigation Service
St. Ignatius, Montana

U. S. Weather Bureau
Helena, Montana

U. S. Bureau of Sports Fisheries and Wildlife
Red Rock Lakes Refuge
Monida, Montana

U. S. Bureau of Reclamation
Billings, Montana
Boise, Idaho

U. S. Soil Conservation Service
Montana, Wyoming, Idaho

Soil and Water Conservation Districts
Montana Counties

U. S. Bonneville Power Administration
Portland, Oregon

U. S. National Park Service
Yellowstone National Park
Glacier National Park

Montana Power Company
Butte, Montana

State Water Conservation Board
Helena, Montana

North Montana Branch Station
Agricultural Experiment Station
Havre, Montana

Montana State University
Agricultural Experiment Station
Bozeman, Montana

University of Montana
School of Forestry
Missoula, Montana

Johnson Flying Service, Inc.
Missoula, Montana

Water Rights Branch, Dept. of Lands and Forests
Victoria, British Columbia

Department of Northern Affairs and National Resources
Calgary, Alberta

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
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